

# Teachers College Journal

Volume IV

Number 1

1915

Published by the Teachers College  
Teachers College, Columbia University

The Journal of the Teachers College is the Journal of the

Teachers College, Columbia University

# THE TEACHERS COLLEGE JOURNAL

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Published bi-monthly by the Indiana State Teachers College,  
Terre Haute, Indiana.

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Entered as second-class matter October 5, 1931 at the post office at Terre Haute, Indiana under the act of August 24, 1912.



# THE TEACHERS COLLEGE JOURNAL

VOLUME IV

JULY, 1933—SECTION 1

NUMBER 6

## Abstracts of Unpublished Masters' Theses Indiana State Teachers College 1933

Smith, Clinton M. *A Standardized Test for the Second Semester of World History*. August, 1930. Pp. 70. (No. 53.)

**PROBLEM.** The purpose of this study was to prepare a standardized test in world history for use in the high schools in the second semester.

**METHOD.** Preliminary tests of approximately 250 items each were prepared. Each test contained four types of questions, namely, true-false, completion, multiple-choice, and matching. Tables of specifications were prepared and adhered to closely. These tables were a general guide and guarded against the omission of essential items and aided in the proper balance of subject matter. A survey was made of four standard history tests from which was realized the number of pages allotted to each period of history. An attempt was made to allocate the test items on this basis. After 1000 copies of the test were given in thirteen schools and the papers return-

ed, each paper was scored according to prepared rules. In general, items were deleted from the preliminary test if they were too difficult, too easy, duplicated other questions, or subjected to some definite criticism by history teachers. The items which remained constituted the standardized test. The items were of varying difficulty. The questions were arranged in cycles in which the questions increased in the order of difficulty.

**FINDINGS.** This standardized test shows unusually high validity and reliability. Validity for the test was found to be  $.85 \pm .018$ . The coefficient of reliability was  $.93 \pm .01$ .

Finley, D. D. *A Comparative Study of the Supervision and Administration of the City and Town Schools with that of the Township Schools in the Public High Schools of Indiana*. August, 1932. Pp. 92. (No. 55.)

**PROBLEM.** Do the township schools

have as good administration and supervision as the city and town schools?

**METHOD.** The research method was followed in the study. Data were secured from the high school reports filed with the Indiana state department of public instruction. The study is for the year 1930-31. It includes 309 county high schools, which is one-half of all those listed as county schools, and all city and town schools. Data were put in frequency tables. The means, standard deviations, et cetera, were found and compared.

**FINDINGS.** (1) The difference in the means in the number of clock hours devoted by the principal to teaching is  $1.366 \pm .074$  in favor of the township schools.

(2) The difference in the means in the number of clock hours devoted by the principal to organization and administration is  $1.436 \pm .086$  in favor of the city and town schools.

(3) The difference in the means in the number of clock hours devoted by the principal to supervision is  $.496 \pm .67$  in favor of the city and town schools.

(4) The difference in the means in the number of semester hours of professional training of the principal is  $2.84 \pm 1.57$  in favor of the township school principals.

(5) The difference in the means in the number of semester hours of professional training in elementary education is  $3.39 \pm .335$  in favor of the township schools.

(6) The difference in the means in the number of semester hours of professional training in secondary education is  $4.3 \pm 1.40$  in favor of the city and town school principals.

(7) Forty per cent (approx-

mately) of the principals stated that they attended school last in the year of 1930, this being for both city and town and the township schools.

(8) The city and town school principals delegate more duties to members of their staff than do the township school principals.

(9) Students in city and town schools are given more responsibilities in the social control of the schools than students in the township schools.

(10) Individual instruction is given more frequently in the township than in the city and town schools.

(11) The city and town schools are superior in the number of items which are provided for in the guidance program.

(12) Cities and towns use tests slightly more frequently than do the township schools for the measurements of pupil diagnosis and the measurement and improvement of teacher efficiency.

(13) The difference in the means of the number of clock hours teachers are normally assigned to teaching is  $.11 \pm .018$ .

(14) The difference in the means in the number of minutes normally assigned to consultation is very small and considering the P.E. of the difference of the means it is insignificant.

Lamb, Herbert Ingram. *The Social Studies in the Junior High Schools of Indiana*. June, 1933. Pp. 96. (No. 56.)

**PROBLEM.** This investigation was undertaken for the purpose of collecting data concerning the social studies in grades VII, VIII, and IX

of the six-six and six-three-three plan schools of Indiana. The field of investigation was confined to definite problems related to the arrangement and allocation of subjects, objectives, textbooks, workbooks, and content of subjects.

**METHOD.** The questionnaire method was used in gathering the data of this study. Grades VII, VIII, and IX of each and every six-six and six-three-three plan school in Indiana were mailed copies of the questionnaire. Of 335 sets of questionnaires mailed out, 100 were returned.

**FINDINGS.** United States, Indiana, and world history, civics, geography, and vocational guidance comprise the social studies in this investigation. Of these, United States History and civics are the chief subjects.

There is no general agreement in the arrangement of the social studies in the school programs. This investigation reveals seventy different programs in one hundred schools. Only seven per cent of the schools offer the same program, which is United States history and civics in grades VII and VIII and no social studies in the ninth grade.

The continued popularity of history, the growing importance of civics, and the practice of teaching both history and civics and sometimes including geography and vocational guidance with them in one grade, have been noticed in this survey.

The three most frequently stated objectives for the social studies as a whole are: (a) to develop an intelligent citizenry cognizant of its duties and obligations; (b) to give the students an orderly account of the history of our country to serve as a background for further study; and

(c) to interest pupils in social progress and to arouse in them the desire for active participation in the improvement of society.

Woodburn and Moran's *Elementary American History* is by far the most popular of the six textbooks used by the teachers of United States history in the seventh and eighth grades. Finch's *Everyday Civics* and Hill's *Community Life and Civic Problems* proved most popular of the textbooks mentioned by the teachers of civics. Cottman's *Indiana History* was an almost unanimous choice of the teachers of Indiana history. *Essentials of Geography II* by Brigham and McFarlane was the most popular textbook named by the teachers of geography. *Occupations* by Gowan, Wheatley, and Brewer was the most popular with the teachers of vocational guidance. Webster's *Early European History* was the most popular of the world history textbooks.

Very little information was given regarding the workbooks used by the teachers of the social studies. In fact, most of those who answered that part of the questionnaire gave a list of the reference books found in their libraries rather than the title of a workbook, probably indicating that no workbook is being used and even, perhaps, that the teachers are unfamiliar with the workbooks. *Study Guide Tests* by Stormzand was the only popular workbook used in the junior high school.

The terms used to designate the types of civics taught in the junior high schools are "Community Civics," "Vocational Civics," "Government," "Citizenship," and "Character Education." Community civics is

the most popular type of civics offered in the three grades studied. Community civics develops the idea of what a community is and considers the social, physical, industrial, and governmental problems which confront communities in general.

Post, Ida M. *The Equipment and the Housing of the Biological Laboratory in the Secondary School*. August, 1932. Pp. 76. (No. 65.)

**PROBLEM.** The impressions which students receive from laboratory work in biology are of lasting importance if they are produced through the proper kind of work. There are many practical applications of the principles learned and these may be rightly pursued to enhance the student's interest. Just to what extent the assortment of the equipment for each of the different phases in the biological study is necessary and how it is represented in the different school systems of the state and the housing of the biological laboratory is the problem from which this study was made.

**METHOD.** The questionnaire method was followed in this study. The questionnaire was prepared with the idea of putting into brief form a comprehensive survey of the materials required for the everyday practices in the laboratory. Those factors which would facilitate the putting across of the subject matter under reasonably good conditions were the points emphasized. The questionnaire was based upon the minimum equipment in the Indiana course of study. The questionnaire was sent to 300 biology teachers in Indiana.

**FINDINGS.** The replies to the ques-

tionnaire showed that the biological laboratories were not uniform as to size or equipment. The teaching of biology is in a state of transition going from the study of preserved specimens to living questions and to the betterment of the community. Many of the schools are using the project method along with the laboratory method. Sets of individual equipment varied from none to a set for each student. There was also a great variation in the amount of general equipment. Seventeen laboratories had no aquaria; fifteen had no microscopes. Some of the schools with large enrollments did not have any equipment and were using the textbook method for teaching biology. The combined laboratory, demonstration, and recitation room was used by all the biology teachers that replied to the questionnaire. The size of the laboratories varied from 10 x 15 feet to 40 x 60 feet. Only eighty-eight biological laboratories were heated by steam. Fourteen laboratories did not have electricity, fifty-three did not have gas, and seventy did not have running water. Fourteen of the replies reported that their schools used school desks in their laboratories, the others used tables varying in size from 21 x 72 x 30 inches to 60 x 144 x 30 inches. All of the biology teachers reported 300 minutes or more per week for the subject. The second floor was used more than any other for biology teaching. There are a few poorly lighted basement rooms used for biology. Only a few of the biological laboratories conformed to the standards given in the state course of study for secondary schools.



Van Ulzen, Alka L. *A Tentative Course of Study for the Seventh and Eight Years' Work in Junior High School Mathematics, Meeting the Needs of Pupils of Superior, Average, and Low Abilities*. June, 1933. Pp. 375. (No. 75.)

**PROBLEM.** The purpose of this study was to determine the kind of subject matter and activities that should be included in a course of study for the seventh and eighth years' work in mathematics to meet the needs of the pupils of superior, average, and low abilities.

**METHOD.** The study was compiled from an analysis of sixteen sets of current textbooks in junior high school mathematics; thirty courses of study chosen from various sections of the United States; and opinions of authorities in the field of mathematics. The data thus collected were organized into a course of study which was used as a basis for three and one-half years of experimentation in the Woodrow Wilson Junior High School of Terre Haute, Indiana.

**FINDINGS.** The survey revealed new trends of thought and better ideas of older trends. The adaptation of the curriculum to meet the probable needs of the child was a new idea in the field of mathematics. In many cases the subject matter was fitted to meet the demands of different types of communities. There was a tendency to introduce into the seventh and eighth year of the junior high school subject matter that formerly was intended for the senior high school such as, geometry, trigonometry, and algebra. Business forms and practices were emphasized more than problems involving the arithme-

tical solution of them. Authorities agreed that the seventh year should contain a review of fundamental processes, percentage, business and industrial problems, graphs, intuitive geometry, and mensuration. In the eighth year emphasis should be placed on investments, banking, industry, community and national problems, roots and powers, algebra, and simple trigonometrical relations.

The experimentation at Woodrow Wilson Junior High School revealed that clasified pupils covered the required amount of work in a given time while the unclassified pupils required more than the given amount of time. A higher degree of efficiency in the work done was obtained through classification. Classified pupils attained a higher degree of efficiency in less time than unclassified pupils.

Superior pupils were found to have the following abilities: desire for accuracy and speed; ability to reason; ability to generalize; and power to deal with the abstract.

Average pupils when grouped together worked at a better rate of speed and through steady work showed a marked improvement.

The slow pupils had limited powers of analysis. They were easily discouraged due to inadequate imaginations and needed constant encouragement, help, and supervision by a superior type of teacher.

Sister M. Fridiana. *An Investigation of the Problem of Dementia Praecox and Its Educational Implications*. August, 1932, Pp. 130. (No. 77.)

**PROBLEM.** This study represents an endeavor to give some idea to the

extent, nature, early manifestations, and principal causes of dementia praecox, the bearing of home and school life upon this mental disorder, and the possibilities in the way of its prevention which lie open to the parent, the teacher, and to anybody who is interested in the well-being of adolescents.

**METHOD.** The research method was followed in the study. One thousand one hundred and seventy-five first admissions of dementia-praecox patients to four Indiana State Hospitals were analyzed and classified with reference to age, sex, environment, occupations, marital conditions, and addiction to alcohol. The writer was also privileged to spend one week in each, Madison State Hospital and Logansport State Hospital, and under the kind and prudent guidance of the medical superintendents of these institutions to study in detail the records of 315 patients, to trace the possible causes of their illness, to come in contact with them in the wards, and to observe their reactions at work and play. The fine psychiatric social service carried on in some of our state hospitals enabled the writer to attain an insight into the family and school histories of one hundred patients which were subsequently summarized.

**FINDINGS.** Dementia praecox, because of its early onset and chronic nature, presents the greatest institutional problem of our mental hospitals.

The magnitude of the cost, both social and economic, of this mental disorder urgently calls for preventive action.

While a predisposition, either in-

herited or acquired, in the great majority of cases is essential, yet some exciting cause in the shape of ill-health, intoxication, severe stress or strain is usually necessary to determine the attack.

The adolescent age with its physiological changes favors the outbreak of dementia praecox.

The onset of this disease appears earlier among males than among females.

Because of the stress of city life and other factors, dementia praecox is more prevalent in urban than in rural communities.

The rate of admissions is higher for indoor than for outdoor occupations.

A striking fact is the frequency with which this disease attacks adolescents of marked intelligence and promise.

Among the early manifestations, the shut-in type of personality is most pronounced.

Many prospective dementia-praecox patients could be saved if more attention were paid to the early manifestations which appear in the form of abnormal personality traits.

The help of parents and teachers in the field of prevention may be of utmost service. They should not only make themselves familiar with the signs of the approach of dementia praecox, but should strive also to learn how to direct the lives of their charges so that strain and other danger to young minds predisposed by heredity or temperament to breakdown may be avoided. Badly directed education, moral and mental, may give a wrong turn to the tendencies of the nervous child and thus leave him with little defense against the ex-

citing causes of dementia præcox when adolescence is reached.

Sister M. Leonardilla. *Third Grade Diagnostic and Remedial Work in the Four Arithmetic Fundamentals*. August, 1932. Pp. 120. (No. 78.)

**PROBLEM.** In this study an attempt was made to measure the effect of a diagnostic and remedial procedure in the teaching of the four arithmetic fundamentals to third-grade pupils.

**METHOD.** The experimental method was used in the study. Two groups of forty pupils each were selected, an experimental and a non-experimental group. A detailed comparison of the two groups revealed the fact that there was no significant difference between them. After determining class weaknesses by comparing class medians with grade norms, individual diagnoses were made, and failures of individual pupils studied.

A twelve weeks' program of remedial and diagnostic work was prepared for the pupils of the experimental group, and special attention was given according to individual and general needs. At the end of twelve weeks of remedial work, tests were again administered to measure improvement and to compare with the non-experimental group which had been taught by the ordinary method of teaching, in which the class was taught rather than the individual.

**FINDINGS.** The pupils of the experimental group showed considerable gain in habits of work as well as in scores. The pupils in the lower quartile improved more than those in the upper quartile. The differ-

ences in means between the two groups in the final follow-up tests were completely reliable and always in favor of the experimental group.

Some of the greatest gains which could not be measured objectively were: first, the teacher's attitude toward failures; second, increased interest in arithmetic on the part of pupils; third, the pupils' attitudes toward their own deficiencies and improvement.

The study shows that the various types of pupil difficulties can be eliminated by means of proper attention and instruction, and that pupils of low intelligence are capable of improving in arithmetic when given individual help as needed, yet prevention of difficulties and errors, and individual attention from the beginning would be of far greater value than remedial instruction.

Sears, Adolphus. *The Relation of the 1930 Psychological Examination to Certain Factors of Freshman Performance in the Indiana State Teachers College, 1930-1931*. August, 1932. Pp. 106. (No. 79.)

**PROBLEM.** The fivefold purpose with which this study was undertaken was to determine: first, the correlation between the examination results and scholarship; second, the relation between the examination results and the number and distribution of course failures; third, the relation between the examination results and student mortality or withdrawals; fourth, the comparative relationship between the examination results of the different curricular groups; and fifth, the comparative value of the individual subject matter tests comprising the examination

as compared to the whole in predicting achievement in the related subject matter fields.

**METHOD.** Statistical analyses and comparisons of the 1930 psychological examination results with the scholarship and mortality records of the 560 freshmen at Indiana State Teachers College during 1930-1931 furnished the basis of the study.

**FINDINGS.** The coefficients of correlation between the examination results and scholarship were positive and in general agreement with the correlations found in other studies. They were somewhat indicative of the achievement that could be expected of the students, but their values were not such as to permit their use alone as single factors of prediction. Correlations by curricular groups and quarters range from  $.25 \pm .05$  to  $.64 \pm .03$ , with the median of approximately  $.50 \pm .04$ . Correlations were highest for the elementary group and lowest for the special curricular group of students.

In general, both the number and percentage of students who failed in one or more courses, and the number and percentage of courses in which they failed, varied inversely with their percentile rank on the examination. Of the 189 students who failed in one or more courses, 69.2 per cent were located below the tieth percentile failed in but 2.0 per cent of the 400 course failures. A total of 76.5 per cent of all students below the tenth percentile failed in 24.2 per cent of all the courses completed by that group. Only 17.5 per cent of the students above the ninthtieth percentile failed in but 2.0 per cent of all the courses completed by that group.

There was but a slight relationship between the students' percentile rank and mortality except during the quarters. The students below the fiftieth percentile were responsible for 73.3 per cent of the withrdawals during the quarters, but for only 52.8 per cent of the withdrawals between the quarters.

The regular curricular group ranked highest on the examination and the elementary group lowest. The means and their probable errors for each of the groups were: regular,  $57.6 \pm 1.5$ ; special  $50.0 \pm 1.2$ ; and elementary,  $44.7 \pm 1.6$ . However, the difference between the means of the special and elementary groups was not a significant one.

The subject matter tests which comprise parts of the examination failed to correlate as highly with their corresponding subject fields as did the results of the entire examination. However, the chances that the true differences were significant were poor.

Engleman, Edward U. *An Analysis of Errors in English Made by Teachers on Various Levels*. August, 1932. Pp. 84. (No 80.)

**PROBLEM.** This study was undertaken with a threefold purpose: first, to determine what errors made by teachers occur with the greatest frequency; second, to analyze and classify the errors by general and specific types; and, third, to compare the frequency of error of teachers on the various levels and in the various departmentalized subject fields.

**METHOD.** The research method was followed in the study. Notes were made covering 1,218 letters written by 1,077 different teachers in



Indiana and Ohio. Three hundred twenty-eight observations of 285 different teachers were made in these two states. Supervisory notes covering 1,413 observations were borrowed from Dr. J. R. Shannon. All of these notes were analyzed for English errors which were subsequently classified by general and specific types.

**FINDINGS.** A total of 5,279 errors was recorded in all letters and observations analyzed. One thousand six hundred forty-seven errors came under the general heading of grammatical errors. There were 308 errors of verb agreement and 182 disagreements of pronoun and antecedent in the grammatical errors.

The general heading of spelling and mispronunciation ranked second in frequency of error with 988 mispronunciations and 135 misspellings.

Punctuation followed with 1,014 errors, including 579 comma errors, 400 of which were comma omissions.

Under the general heading of mechanics, 890 errors were made, 588 being capitalization errors, of which 535 were capitalization of common nouns.

A study of the incidence of error in all letters revealed the following facts:

Approximately seventy per cent of the letter-writers made errors.

A total of 2,690 errors occurred.

The average and the median of the errors per person per letter with error were 3.28 and 2.71 respectively.

The average number of errors per hundred words per person in letters with error was 4.19, and the median was 3.09.

A study of the incidence of error in

the Indiana and Ohio observations revealed the following facts:

Eighty-one per cent of the teachers made errors.

Using the median number of errors per person per observation for all observations as the basis of comparison, it was found that: the men made more errors than the women; the regular teachers made slightly more errors than the student teachers; and the rank by grade level in descending order of frequency of error was senior high school, junior high school, primary, and intermediate.

When comparison was made on the basis of the average instead of the median, the number of errors per person per observation increased with the grade level taught, the primary teachers making the fewest errors.

Including only those subjects in which ten or more observations were made the rank of the teachers of the departmentalized subjects, in descending order of frequency of error, was: science, social studies, mathematics, English, industrial arts, and Latin.

Prout, Dale. *A Comparative Study of the Intelligence Quotients and Grades of High School Pupils on Special Courses and Those on Academic Courses.* August, 1932. Pp. 94. (No. 81.)

**PROBLEM.** This study was undertaken with a twofold purpose: first, to compare the intelligence quotients of pupils majoring in industrial arts and commerce with those majoring in academic subjects; second to compare the pupils' grades in the special

subjects with their grades in the academic subjects.

**METHOD.** The research method was followed in the study. Five Indiana high schools, which the writer has called A, B, C, D, and E, were visited. These schools had determined the I.Q.'s of their pupils and had fully organized departments in the special subjects. First a comparison of the I.Q.'s was made between the academic and special pupils of each school. Next a comparison of the I.Q.'s was made in schools A, B, and C combined. These schools are located in the same city. The I.Q.'s of 612 pupils in all the schools combined were also compared, of this number, 198 were academic pupils, 220 were commercial pupils, and 194 were industrial arts pupils. In making the above comparison the reliability of the difference between the means was calculated by the formula given by Garrett.<sup>1</sup> The results of the true difference were referred to Table XIV of Garrett.<sup>2</sup> In each school the grades of the special pupils were compared with those of academic pupils. The grades were also compared in schools A, B, and C combined.

**FINDINGS.** No matter whether the comparisons were made between the I.Q.'s of the pupils on the different courses within the same school, or between schools A, B, and C, or between the 612 cases of all the schools, the academic pupils were first, the commercial pupils were second, and the industrial arts pupils were third, when compared by their medians.

When compared by their means, the same thing was true, except in school B where the chances were only sixty-seven in one hundred that the true difference (in favor of the commercial pupils, when compared with the academic pupils) was "significant." This low reliability suggests that this difference is due to chance. The industrial arts pupils, however, were still third in school B. The differences in intelligence ratings between courses are not large, but the consistency of these differences in the various schools is marked.

Evidently the teachers of the special subjects graded higher than the other teachers for the pupils, no matter what course they were on, made higher grades in the special subjects. However, the difference between the grades in the academic and in the special subjects was insignificant. The average grades of the pupils on the various courses were about the same because the grades of the special pupils in the special subjects tended to raise their general average. Of course, the average grades of the academic pupils were also raised when they took special work, but they did not take nearly as many terms of special work as did the special pupils. In conclusion, it may be said, that on the average, if a pupil is good in an academic subject he will be good in a special subject also, and vice versa.

Vance, Ira W. *An Analysis of Errors in Beginning Algebra as Revealed by Two of the Hotz Algebra Scales*. August, 1932. Pp. 77. (No. 82.)

**PROBLEM.** The purpose of this study was to analyze the errors

<sup>1</sup>Henry E. Garrett, *Statistics in Psychology and Education*, (New York: Longmans, Green and Company, 1932), p. 130.

<sup>2</sup>*Ibid.*, p. 134.

which pupils made in beginning algebra. The problem resolved itself into finding answers to the following questions: (1) What are the types of errors which pupils make in beginning algebra? (2) What effect has a year of arithmetic upon the types of errors which pupils make in beginning algebra? (3) Is there any outstanding difference between the types of errors which boys as a group and girls as a group make in beginning algebra? (4) What effect has the size of the class upon the types of errors which pupils make? (5) What effect has the intelligence of the pupils upon the types of errors which they make?

**METHOD.** The data included in this study were collected from 387 high school pupils, representing twenty classes in twelve different schools. There were 200 of these pupils in the ninth grade and 187 in the tenth grade. There were 209 girls and 178 boys. None of the pupils had ever studied algebra before, but all tenth grade pupils had had a year of arithmetic in the ninth grade.

Each pupil involved in the study was given two standard intelligence tests, two tests on the fundamentals of arithmetic, and as a final examination, two of the Hotz Algebra Scales. The errors found on the algebra tests were classified according to grade, sex, size of class, and intelligence of the pupils.

**FINDINGS.** There was a total of 2,862 errors, involving twenty-four types, found in the algebra tests. The greatest percentage of errors were found to be those dealing with problems and seemed to arise from the failure of the pupil to comprehend the problem. There were 41.23 per

cent of the total number of errors of this type. Other types varied from sixteen per cent of the total down to less than one per cent of the total.

There was no very great difference in the percentage of errors of the different types that ninth and tenth grade pupils made in beginning algebra. The fact that tenth grade pupils were more skilled in the fundamentals of arithmetic did not have much effect upon their arithmetic computation in algebra.

Boys make a greater percentage of errors dealing with the fundamental operations of equations than do girls. Girls make a greater percentage of errors dealing with the comprehension of written problems than do boys. There is no difference in the total number of errors per pupil for boys and girls.

The total number of errors per pupil increases with a decrease in intelligence. Pupils with high intelligence make a smaller percentage of errors dealing with forming equations for written problems than do those with low intelligence. The factor of intelligence has a very decided effect upon the types of errors which pupils make in beginning algebra.

The size of the class did not seem to be very important as a factor contributing to the types or number of errors which pupils make in beginning algebra.

Crawl, Ray. *A Course of Study for Teaching of Bible in the High School*. August, 1932. Pp. 99. (No. 83.)

**PROBLEM.** The purpose of this study was to make a usable course of study for the teaching of Bible in the high school. There were guides,

outlines, and suggestions but no course of study in this field. The author has tried to make a course of study that will meet the needs of the classroom by offering the minimum essentials for slow pupils and optional work for the average and above average pupils.

**METHOD.** The research method was followed in this study. The information for this study was obtained from government bulletins and library materials, including a doctorate dissertation. A course of study was obtained from each state, and a study of the constitution and laws of each state was made.

**FINDINGS.** The findings come under three heads: first, the status of Bible in the public schools of the United States; second, justification of the Bible in the public school; and third, a practical course of study.

In the first part of the thesis the findings were as follows: Bible reading in the public schools is required by statute in eleven states and in the District of Columbia; in five states it is permitted by law; in twenty states it is generally construed as lawful; and in twelve states it is generally regarded as unlawful.

In the second part of the thesis the findings were as follows: The Bible is justified on the fact that it is the one book that becomes more nearly being universal than any other one book. School children when tested show a lack of knowledge of the Bible.

In the third part the findings were:

1. The Bible is the oldest American textbook.

2. It is the book that is most in demand by the public for more copies

of it are sold than any other book.

3. It is used in all sessions of our courts and legislatures.

4. It is a book that contains a history of a nation.

5. Most of our literature has been punctuated by the Bible.

6. The government has incorporated many Biblical principles in its laws.

Kadel, Mary J. *The Effect of Providing for the Needs of the Retarded Group, through Solving the Problems of Individual Children.* August, 1932. Pp. 71. (No. 84.)

**PROBLEM.** This thesis was undertaken with the following purpose: to study the possibilities of attempting to provide for the needs of the retarded group by solving the problems of the individuals within the group.

**METHOD.** The research method was followed in the study. Letters were written to superintendents, directors, and supervisors of special classes in cities and towns having a population of 10,000 or more. In order to guide the writer in formulating her solution, a study was made of the ways in which the problem is being met by others engaged in working with retarded children. The situation regarding the education of retarded children in Terre Haute, Indiana was discussed because this thesis is a summary of the methods used and the results obtained by the writer during the five years in which she was engaged in teaching retarded children in this city.

**FINDINGS.** In progressive cities, the selection of atypical children for the special classes was made by the use of the Stanford Revision of the Binet-Simon Tests. Children who



had an intelligence quotient of seventy or below or who were seriously retarded pedagogically were recommended for these classes. Each child was placed where he would fit best with regard to his academic abilities.

The following conclusions were drawn from this study:

Individual instruction enabled the children to progress at their individual rate.

From the units of work and case studies it is evident: first, that the pupils were given instruction in such units as health and safety which function at the level on which they are now living and on which they will continue to live; second, that these units together with the emphasis on sense training resulted in increased poise, judgment, and muscular coordination; third, that the principles set forth as underlying method resulted in interest and progress in school.

From the manual training the following results may be pointed out:

Development of muscular coordination and control.

Satisfaction to the urge for self-expression through making something.

Increased ability in social adjustment, through experience in cooperation, when working in groups toward a common purpose.

Development of imagination, originality, and discrimination. When the children received the type of training adapted to their limitations, and had the opportunity to compete with children of their mental ability, school tasks did not become unbearable. Thus, they were willing to re-

main in school to a later age than they otherwise would.

Mutchler, V. D. *A Supplement, Stressing the Sanitary Conditions of the Home and Its Surroundings, to the Health Program of the Riley Township Schools in the Seventh, Eighth, and Ninth Grades.* August, 1932. Pp. 113. (No. 85.)

**PROBLEM.** This study was undertaken with a threefold purpose: first, to determine whether health education, concerning the sanitation of the rural home and its surroundings, is or is not a failure in the United States as a whole; second, whether or not it is a failure in Riley Township; and third, to prepare a supplement to be used in relation to the existing course of study in the seventh, eighth, and ninth grades of the Riley Township schools.

**METHOD.** The research method was followed in the study. The public health departments and the departments of public instruction of the states of the United States and also the national departments were written and asked for health manuals, bulletins, or any other available literature used in the teaching of health. Teachers college catalogs were obtained from colleges in twenty-eight states and the courses in physical education, health, biology, and physiology were checked. Health books by present day authors were analyzed. State adopted textbooks in civics, biology, and general science were measured in square inches. Personal visits were made to eighty-five homes in Riley Township with a questionnaire. Samples of water and milk were also obtained and tested in the laboratory of Indiana

State Teachers College. All of these results were tabulated to find whether or not health education was a failure and to ascertain the points that have been neglected in the teaching of the sanitation of the rural home and its surroundings. The supplement was then prepared in discussion form from textbooks, government and state health bulletins, state school programs and courses of study, health books, and other sources.

**FINDINGS.** Less than one-third of the state health departments had literature on sanitary or health surveys and only one state department of public instruction had any special material for the schools to use in stressing the sanitation of the rural home.

The majority of state teachers colleges are training physical education directors and teachers of biology and physiology and require their students to take one general health course.

Present-day authors of health books have realized and are stressing the fact that the country is far behind the city in health and sanitation.

The measurement of the state approved texts of Indiana showed that there is not sufficient subject matter to cover thoroughly the sanitation of the rural community.

The results and conclusions of the sanitary survey of Riley Township proved that toilets, sewage disposal, wells, drainage, poisonous plants, flies, mosquitoes, smallpox, diphtheria, typhoid, malaria, scarlet fever, and tularemia do not receive sufficient stress to make health education, concerning the sanitation of the rural

home and its surroundings, a success.

Fortner, J. Ord. *Extra-Legal Control of High School Interscholastic Athletics in Indiana*. August, 1932. Pp. 92. (No. 86.)

**PROBLEM.** This study was made with a threefold purpose: first, to show the development of the Indiana High School Athletic Association and its form of organization; second, to analyze the decisions of the board of control in the cases that have been before the board; and third, to show the source and growth of the finances of the organization.

**METHOD.** The research method was followed in the study. The handbooks of the association from its founding in 1903, to 1931 were used for the material of the study. A brief history of the association, based on the records of the organization, is given; 1,305 cases were read, studied, and classified under thirteen main headings with many sub-headings; an analysis of the finances of the association was made showing that there are ten sources from which revenue is derived.

**FINDINGS.** The first attempt to organize an I. H. S. A. A. was in April, 1903. It was finally organized in December, 1903.

The personnel of the boards of control has been of the very highest type of school men, who thought and planned well for the association.

The association has had but four men who have served as its permanent secretary which has been largely responsible for its efficiency as an association.

The membership from 1903 to 1931 grew from 15 charter members

to 800 active members.

The athletic council is the law-making body of the association. The board of control, chosen by the athletic council from its own membership is the administrative body. The commissioner is the secretary to the board of control and the athletic council.

The I. H. S. A. A. aims to promote the educational interests and ideals in high school interscholastic athletics.

Good school procedure in the administration of high school athletics is encouraged.

The finances of the association are in a sound condition, being fully protected with insurance, and the commissioner being under bond to the amount of the investments.

The finances have experienced a decided growth beginning with the employment of a full time secretary in 1922.

There are ten courses of revenue: membership fees, registration of officials, tourney entry fees, sectional tourney receipts, regional tourney receipts, state tourney receipts, insurance receipts, sales of securities receipts, receipts from interest on investments, and receipts from rentals.

Of the 1,305 cases in 469 schools which were read, studied, and classified, 254 (19.4 per cent) cases were in 132 (28.1 per cent) schools with enrollments of 1 to 75; 257 (19.7 per cent) cases were in 128 (27.3 per cent) schools with enrollments of 76 to 120; 312 (23.9 per cent) cases were in 113 (24.1 per cent) schools with enrollments of 121 to 250; 237 (18.2 per cent) cases were in 50 (10.6 per cent) schools with enrollments of 251 to 600; and 245 (18.8

per cent) cases were in 46 (9.9 per cent) schools with enrollments of more than 600.

Moore, William R. *A Survey of Junior High School Literature Texts Based upon an Evaluation of Literary Characteristics*. August, 1932. Pp. 124. (No. 87.)

**PROBLEM.** Literature texts have heretofore been composed at random. The problem of this survey is to determine and rank the important characteristics of junior high school literary selections. The results of such a survey will enable teachers to select and teach only the best material in the field of junior high school literature.

**METHOD.** Authorities in the field of literary criticism were considered to develop a list of the aims of junior high school literature. The six aims outstanding from this study were: 1. To create a permanent interest in literature. 2. To keep material studied on the junior high school level. 3. To teach the child to express himself. 4. To stimulate the imagination. 5. To teach the values of literature. 6. To teach citizenship.

Using these six characteristics as a basis, a check list was made by which a teacher could evaluate and judge selections. Varying weights were given each criteria according to its importance. A different score list was made for each of the literary types, as the lyric, essay, ballad, story, and epic. Then, too, different scales were made for classical and the entire field of resulting scores could be compared on the same level.

The above scales were used to survey, evaluate, and compare six sets of texts, eighteen volumes in all.

One thousand eighty-one selections were read and rated. The final scores of both texts and selections were compared with medians, which differed with each of the literary types. Then the texts were compared as to the balance of selections and the quality of material contained, thus ranking the six sets in the order of their excellence. Each of the various literary forms was contained in a separate list, which gave the score of each selection.

**FINDINGS.** The best series of junior high school texts was found as one result. It was also found that most books used are composed at random, are unbalanced as to quantity of each form used, are too short, and should be of a more uniform quality. The tendency is toward modern authors. A more frequent use of the essay is recommended. The various lists of selections were included in a thorough appendix.

The following nine characteristics are recommended as a basis for judging any literary text for the junior high school: 1. The material should be interesting. 2. It should contain some dramatic action. 3. Humor should be used to some extent. 4. The characters should be interesting. 5. The selections should be appropriate and comprehensible. 6. The work should aid in increasing the pupil's vocabulary. 7. The use of the supernatural element will help. 8. The selections must have literary value. 9. The work must train for citizenship.

Miller, Belle C. *Historical and Cultural Background for the First Three Semesters in the Study of Latin*. June, 1933. Pp. 151. (No. 88.)

**PROBLEM.** This study is undertaken to ascertain in what ways authors of recent texts for the use of students in beginning Latin are endeavoring to develop the historical and cultural aims in the teaching of that subject.

**METHOD.** The research method was largely followed in this study. Fourteen first-year, and ten second-year texts were carefully and critically examined to learn the attitude of the various authors toward this subject, and to find what methods had been employed and what materials had been used by each author in his development of this aim. Resulting data were assembled in diagram form and a summary of findings recorded. In conjunction with the above, and to establish a basis for comparison, seven older texts of common usage in beginning Latin classes prior to 1920 were examined and the findings recorded.

**FINDINGS: From older texts:**

All the older texts are preeminently preparatory for the reading of Caesar's "De Bello Gallico."

One text, "Bellum Helveticum," is devoted entirely to the Caesar text.

All texts, except "Bellum Helveticum," employ separate and unrelated sentences to form their reading lessons.

Reading lessons emphasize points of syntax and vocabulary and have little or no cultural value.

Continuous reading having cultural content is usually confined to the appendix.

Readings are largely from historical sources, preferably Caesar.

**From recent texts:**

Recent texts show a constantly increasing tendency toward the adop-



tion of the reading lesson in continuous form.

Reading lessons offer a content which is interesting and worth while in itself.

The "English into Latin" exercises are gradually displaced by conversational methods.

English readings with cultural value become increasingly frequent.

Map and pictorial illustrations relating to the reading material increase in number and excellence of quality.

Life and customs of the Romans are the most frequently used subjects for reading lessons.

The tendency is to cease teaching Latin as an art.

Emphasis is coming to be placed upon the cultural value of Latin.

Bolton, Helena C. *A Selective Digest of Recent Trends in the Teaching of Senior High School Written Composition*. June, 1933, Pp. 78. (No. 89.)

**PROBLEM.** This study is based upon a twofold purpose: first, to compile a digest of selected articles published in 1931 and 1932 on the general subject of written composition in the senior high school; and, second, to prepare a convenient index of this selective reading list for the use of composition teachers in the senior high school.

**METHOD.** A subjective method of selecting the reading list was resorted to. It consisted: first, of selecting articles from the *Education Index*, as a reliable guide, on the definite topic of the research and for the specific years indicated; second, of submitting this selected bibliography of sixty-eight articles to an authoritative

group of thirteen individuals familiar to this field for their evaluation of the worth of each known article. There were forty-four articles in the final tabulation that received a final rank placement procedure. Of these the first thirty-one are digested in the body of the study.

**FINDINGS.** Some of the recent trends in the teaching of written composition are:

It is necessary to adopt and carry out a program of essentials in any school unit if the study of mechanics is to be sufficiently restricted for proper emphasis on effective communication.

An attempt should be made to understand the potential educational worth of the examination and to plan for an intelligent use of it in the teaching program.

In helping to develop creative intelligence and production, the teacher should strive to arouse the student's interest in situations that are different; use classroom experience to stimulate individual thinking; and "set pupils at work upon their own actual problems of induction."

Personal and classroom incidents of everyday life can easily be made the basis for composition activity.

A main purpose in teaching composition is to teach the student to get a command of the English language so he can intelligently and fluently express his own ideas, interests and thoughts.

One of the best ways of helping a student to learn to write has been found to be destructive criticism, a pointing out of mistakes and errors and leaving the remedy to be made by the student.

The interview used as a composi-

tion device gives valuable results, for it not only teaches lessons in good oral English, but also gives a splendid lesson in the development of poise and social etiquette, and psychologically it starts the child upon the road to weaning himself from the childish dependence.

It is every teacher's duty, regardless of his subject, "to create and maintain a compelling English environment in our high schools."

Erwin, Cecil R. *A Study of the Vocabularies in Recently Written First and Second Year High School Latin Texts*. August, 1932. Pp. 105. (No. 90.)

**PROBLEM.** The purpose of this study was twofold: In the first place, six Latin texts (three first year books and three second year books) were examined to determine whether their vocabularies were influenced by the first and second year Latin Word List of the College Entrance Examination Board of New York. In the second place, an investigation was made to ascertain how many words of the Latin Word List had at least one English derivative.

**METHOD.** First, the Latin Word List of the College Entrance Examination Board of New York was obtained. Second, the vocabularies of six texts [*First-Latin* by Victor E. Francois, *Latin for Today* (First Year Course) by Mason D. Gray and Thornton Jenkins, *Latin-First Year* by Ralph Van Deman Magoffin and Margaret Young Henry, *Latin-Second Year* by Lillian Gay Berry and Josephine Lee, *Latin for Today* (Second-Year Course) by Mason D. Gray and Thornton Jenkins, and *Second-Latin* by Jared W. Scudder] were

examined. The number and the exact words of the Latin word list used by each book were found. Third, the number of words in the Latin word list that had at least one English derivative was found by examination of all the words in Walter W. Skeat's *Etymological Dictionary of the English Language* and Webster's *New International Dictionary of the English Language*.

**FINDINGS.** A complimentary text, in this case, is one which has been written to follow or precede a certain Latin text. Speaking in terms of complimentary texts, Magoffin and Henry's *First Latin* and Berry and Lee's *Latin-Second Year* contained 99.56 per cent of the words of the Latin Word List of the College Entrance Examination Board. Gray and Jenkins in their first and second year Latin texts used 99.78 per cent of the words in the Latin Word List. Francois in his *First-Latin* and Scudder in his *Second-Latin* used 99.78 per cent of the first and second year Latin Word List of the College Entrance Examination Board. If the compounds of -scendo, -gredior, -pleo, and -scipio had not been included in the Latin Word List, the complimentary texts would have used every word in the list. The omission of certain compounds was probably due to the failure of authors to agree upon what compounds of these words to use.

Furthermore, 784 words of the 1,913 words in the Latin Word List have at least one English derivative. That is, 85.87 per cent of the words in the list have at least one English derivative. Nearly all of the words that do not have English derivatives are pronouns, prepositions, adverbs,

and conjunctions. Of these the English language received a full supply from its ancestor Anglo-Saxon. Obsolete and archaic derivatives were omitted in this study.

McBride, Waldon A. *Influence of Occupations and Industries of Home Communities upon Freshmen at Indiana State Teachers College in 1924-1925, 1926-1927, 1928-1929, 1930-1931. August, 1932. Pp. 47. (No. 91.)*

**PROBLEM.** The purpose of this study was to find: first, which type of community, industrial, agricultural, mineral, or a general mixed type usually influenced by a college or university, sent the best students to Indiana State Teachers College; second, length of course entered on, whether two or four years; third, whether there was any difference according to sex in grade of work done during the freshman year; and fourth, length of time the subjects of the study remained in school.

**METHOD.** The research method was followed in this study. Data were obtained from records of 1,789 students from the registrar's office. Records of only those students who, after graduating from high schools in Indiana, had not attended any other colleges or universities were used. The communities, cities, towns, or townships in which the high schools from which the students graduated were located were classified into four classes or types according to their chief occupations and interests. The four types were: Type A—Industrial; Type B—Agricultural; Type C—Mineral; Type D—General.

**FINDINGS.** Students who complet-

ed three or more quarters were superior to those who completed only one or two quarters. The best four-year students, as a whole, were from mineral working communities. The ranking of the four groups was: first, Type C; second, Type B; third, Type A; fourth, Type D. The ranking for the men was: first, Type B; second Type D; third, Type A; fourth, Type C. The ranking for the women was: first, Type C; second, Type B; third, Type A; fourth, Type D.

The best two-year students, as a whole, were from Type D communities. The ranking of the four types was: first, Type D; second, Type C; third, Type A; fourth, Type B. The men ranked A, B, C, D, in descending order. The women ranked D, C, A, B, in descending order.

Seventy-five per cent of the students from Type A communities enrolled upon four-year courses. The ranking of the four types was: first, Type A; second, Type D; third, Type C; fourth, Type B. Both men and women had the above ranking.

Women students were better students than men students on both two-year and four-year courses.

A slightly higher per cent of two-year students than four-year students complete three or more quarters' work. The same was true for both sexes. The ranking of four-year students was: first, Type A; second, Type D; third, Type B; fourth, Type C. The men's ranking was: first, Type A; second, Type B; third, Type C; fourth, Type D. The women's ranking was: first, Type D; second, Type A; third, Type B; fourth, Type C.

The ranking of two-year students was: first, Type C; second, Type A;

third, Type B; fourth, Type D. The men's ranking was: first, Type D; second, Type C; third, Type B; fourth, Type A. The women's ranking was: first, Type C; second, Type B; third, Type A; fourth, Type D.

Clements, J. D. *The Status of Athletic Coaches and Men Engaged in Teaching Physical Education in Indiana Senior High Schools*. August, 1932. Pp. 84. (No. 92.)

**PROBLEM.** The study was undertaken with the purpose of making a survey of the men teaching physical education and coaching athletics in the public senior high schools of Indiana. The survey was made on the basis of preparation, experience, salaries, and professional attitude.

**METHOD.** The questionnaire method was followed. Notes were made from 425 questionnaires.

**FINDINGS.** Approximately ninety-one per cent of the men are from Indiana, thirty-nine per cent of whom are from central Indiana.

More than ninety per cent of these men took undergraduate work in Indiana colleges or universities, most of them receiving their training from teacher training institutions.

Eighty-six and five-tenths per cent of these men are college or university graduates. Northern Indiana men lead the number of those holding master's degrees, while southern Indiana men lead the percentage of those doing advanced work at the present time. Approximately forty-five per cent of the men authorized to teach physical education teach the subject on permit. Northern Indiana men are somewhat better prepared to teach this educational activity.

Approximately sixty-five per cent of the Indiana men teach in their own locality.

Northern Indiana men have slightly more total teaching experience. Central Indiana men have more teaching experience in physical education.

More men hold their first position longer than any other.

Central Indiana men have the high median age. It is 29.21 years.

More men teach social science than any other subject grouping.

Northern Indiana is using fourteen per cent of her men in administrative offices, while southern Indiana is using more than twenty-six per cent of her men as executives and deans.

Southern Indiana has fifty per cent of her number serving as departmental heads. More men are heads of the department of mathematics than any other subject.

Basketball ranks first of all the single sports coached. Basketball and baseball forms the leading combination of sports coached. Thirty-eight per cent of the central Indiana coaches have this combination.

Practically all the men have approximately twenty-six classes per week.

The most frequent combination of duties was found in northern Indiana where a fivefold duty was indicated through the teaching of physical education, academic subjects, directing of athletics, coaching of athletics, and assembly.

The high salary median is held by the men of southern Indiana. It is \$1709.33.

Many attend summer school; a fairly large number attend coaching



schools; and a few take extension courses.

More athletic books are read than are physical education or educational books; more athletic magazines are read than are professional or general magazines.

In general, the academic training and professional attitude of these men is good, but more specific training is needed in physical education.

In the larger number of the various factors considered central Indiana men rank first.

Tranbarger, John C. *Practice in the Fundamentals of Printing*. August, 1932. Pp. 192. (No. 93.)

**PROBLEM.** The purpose may be summed up under two leading objectives. The first objective was to prepare a series of lessons of sufficient number and suitable type that the student who completes them in a satisfactory manner will have an elementary working knowledge of printing. In the second place, an attempt was made to combine instruction sheets and job sheets in such a way that while the manipulative skills were being mastered, a knowledge of many of the things any printer should know, such as the history of printing, famous printers, the making of paper, printing styles, et cetera, was acquired without conscious effort or the use of formal assignments. The lessons were so arranged that it is possible for the instructor to determine the aptitude of the student before he has proceeded very far in the course. The lessons are intended for actual classroom use and the instructions are intended to be full enough and simple enough even for elementary pupils

that they may proceed on their own initiative, thus relieving the instructor of this detail and giving him time for the important matter of supervising the work and correcting errors—both in the completed proofs and in accepted standards of manipulation.

**METHOD.** Loose typewritten sheets were used with college classes in printing to determine both the correctness of the theory for which the lesson was intended and its proper classification as to degree of difficulty. Later these were set in type and printed and the experiments continued over a period of two years. After corrections had been made, they were reprinted, this time being sent to four high schools in widely separated parts of the country and there tried under actual classroom conditions. Copies were also sent to many teachers of printing and directors of vocational education for examination.

**FINDINGS.** The suggestions offered by those who examined the book were carefully considered and such as were thought worthy were incorporated into the final form of the thesis. Some suggestions were arbitrarily rejected. It was felt that when a question of judgment was involved, the author's longer experience and careful study of the question should be the deciding factor.

Hinton, Charles M. *A Comparative Study of the Usefulness of the Different Types of Graphs Used in Junior High School Mathematics Textbooks*. August, 1932. Pp. 92. (No. 94.)

**PROBLEM.** The purpose of this study was to compare the degree of

usefulness of the different types of graphs used in junior high school mathematics textbooks.

**METHOD.** An analysis of recent junior high school mathematics textbooks was made to form a basis for the construction of tests to measure pupils' abilities to read the various types of graphs. These tests were checked for both validity and reliability. The scores made by 767 pupils in nine schools on these tests comprise the basic data of this study.

**FINDINGS.** The ranking of graphs used in this study according to their readability by junior high school boys is as follows: divided bar graph, bar graph, circle graph, line graph, and pictogram graph.

The ranking of graphs used in this study according to their readability by junior high school girls is as follows: divided bar graph, circle graph, pictogram graph, and line graph.

Boys and girls seem to read different types of graphs with about the same degree of accuracy.

There seems to be almost perfect correlation between frequency of appearance of these types of graphs in textbooks and abilities to read graphs, except in the case of the line graph. The line graph seems the most difficult type to read.

The correlation between average mathematics grades and ability to read graphs is not high. The coefficient is  $.387 \pm .0207$ .

Slaven, Nimrod. *A Study of Male Juvenile Delinquency*. June, 1933. Pp. 68. (No. 95.)

**PROBLEM.** The study was made to determine: at what age boys are most likely to be delinquent; the

parental condition in delinquent's home; the scholastic retardation of delinquents; offenses most committed by delinquents; the Terre Haute, Indiana school furnishing most of the city's delinquents; and the relation, if any, of scholastic standing to delinquency.

**METHOD.** A library study of delinquency followed by a research in the records of the probation office of Terre Haute, Indiana furnished the material. Notes were made covering the cases of 288 boys who were delinquent during the years 1929 and 1930. Research work in the same subject, by other individuals, made some comparisons possible. Scholastic records for the delinquents and a like number of non-delinquents were obtained from Terre Haute's schools and a comparison of the scholastic standings was made.

**FINDINGS.** Of the 288 cases studied, 160 were in the probation office during 1929 and 128 during 1930. Fifty-nine of these boys were sixteen years of age; sixty-two were fifteen years of age; forty-five were fourteen years of age; thirty-two were thirteen years of age; twenty-four were twelve years of age; with the remainder scattered over the other juvenile ages.

Boys from families with step-parents, parents, and only one parent were delinquent, but 160 of them had both parents living and at home.

The delinquents were retarded from one to eight years with only twenty-two either normal or advanced and an average retardation for the entire group of two years.

Fifty-one boys had committed the offense of petit larceny; forty-five

had been disorderly; thirty-five had committed larceny; twenty-nine were truants from school; twenty-six were incorrigible; and the remainder were widely scattered among minor offenses.

Gerstmeyer school furnished forty-one of the delinquents, Hook school twenty-two, Woodrow Wilson school thirteen, McLean school twenty, Washington school thirteen, Glenn school twelve. The remaining ones were widely scattered among other Terre Haute schools.

A comparison of the scholastic records of delinquent boys and an equal number of non-delinquent boys from each school revealed the fact that non-delinquents make higher scholastic marks. The median mark for the delinquent group was 83.7 per cent and for the equal number of non-delinquent boys was 90.1 per cent.

Dailey, Theodore R. *The Mental Ability and Scholastic Attainment of Colored Students Entering Indiana State Teachers College for a Period of Five Years, 1924-25-26-27-28.* June, 1933. Pp. 40. (No. 96.)

**PROBLEM.** The purpose of this thesis is to make a comparative study of the marks, intelligence, withdrawals, majors, and sex of colored students of Indiana State Teachers College, and to compare these answers with opinions the writer has heard expressed from time to time. The study is limited to a comparison of records made by 187 colored students who entered Indiana State over a period of five years, 1924-1928.

**METHOD.** Data were secured from the registrar's office and the office of the Dean of the Faculty. The fol-

lowing system was used in compiling points: A-4; B-3; C-2; P-1; F-0, and WF--0. Incompletes, deferreds, and credits for unprepared subjects were ignored. In counting the subjects, the four-hour courses were considered as one and the two-hour courses were as one-half. The scholarship record and all information needed for this study were collected on an individual data sheet.

**FINDINGS.** 1. There is no definite relationship between the general intelligence of colored students as measured by intelligence tests given students entering Indiana State Teachers College and scholastic attainment as measured by marks.

2. The scholastic attainment of colored students from mixed high schools is superior to that of colored students from segregated schools.

3. Low marks of colored students influence withdrawals.

4. The mean scholarship index of male colored students was 4.98 higher than that of female colored students; however, this may be significant when you consider the fact that there are only thirty-two male cases and 155 female cases.

5. Colored students of low intelligence withdraw more often than do colored students of high intelligence, therefore low intelligence influences withdrawals.

6. Intelligence influences the selection of majors.

7. The intelligence of male colored students is above that of female colored students.

8. Colored students from mixed schools are superior in intelligence to those from segregated schools; however, this may not be significant as other studies show that negroes

from segregated schools do as well or better than those from mixed schools.

9. Sex of colored students does not influence withdrawals.

In the light of this study it would seem fairly safe to conclude that there is no definite relationship between the general intelligence of colored students who enter Indiana State Teachers College and their class marks, and that the intelligence of colored students from mixed schools is superior to that of colored students from segregated schools. Also, that low marks and low intelligence influence withdrawals. If data on colored students who entered Indiana State are considered alone then students from mixed schools do better than those from segregated schools.

Upthegrove, Campbell L. *A Survey of State School Systems of the United States*. June, 1933. Pp. 96. (No. 97.)

**PROBLEM.** The purpose of this study is (a) to present in brief form what is considered best in the administration of state school systems, (b) to determine what states are using and what ones are not using these principles, and (c) to reveal the trends in state school administration.

**METHOD.** This survey includes eight divisions of state school administration. A questionnaire in regard to these eight divisions of state school administration was sent to the state departments of education of the forty-eight states. Some information was collected from the school codes of the forty-eight states.

**FINDINGS.** Thirty-four states require an annual school census. Mississippi and Tennessee are the only states that do not permit kindergar-

tens in the various school districts. The age range for compulsory full time school attendance in the majority of the states is seven to sixteen. The laws of twenty-six states require compulsory part-time schools when there are enough pupils to make a class. The range in the length of the school year is from eight months to nine and one-half months for twenty-six states. In forty-five states there are laws providing the school district with attendance officers.

Eleven states still use the high school for teacher training classes. Forty-five states require high school graduation for admission to accredited teacher training schools. Twenty-three states require two years training above high school for the elementary school certificates, and thirty-six states require four-year training above the high school for secondary school certificates. Forty-one states have exclusive power in the certification of teachers.

Twenty-three states issue certificates for admission and supervision. The law of twenty-seven states provide for high school certificates in the various fields. Seventeen states require a health certificate for initial certification of teachers. Twenty-nine states grant teachers' certificates on teacher training schools' recommendations.

Twenty-one states have laws fixing the minimum salaries of teachers, and in fourteen of these, the states apportion money from state funds to the local districts. Five states grant sabbatical leave with full or part pay.

Twenty-two states have state-wide teacher retirement systems; membership is required of new teachers



in seventeen states. Ten states make provision for compulsory retirement at a specified age. The teacher and the public contribute to the retirement fund in seventeen states.

The state board of education controls the permanent school fund in eight states. There are constitutional maximal limitations on state or local school taxes in twenty-three states. State income taxes to supplement the general property taxes are levied in fifteen states. Local school units are required to levy a tax in twenty-eight states. Bonding for current operating expenses is prohibited in twenty-nine states.

Thirty-two states have state equalization funds. Twenty-five states apportion the largest per cent of their school funds on school census.

Twenty-two states have predominantly lay state boards of education. Ex-officio members are omitted from the boards in fourteen states. The average term of the members of the board is five years, and the average number of members on the board is seven.

There are no residence requirements for the chief state school official in twenty states and his average salary is \$5,700. The majority of the states have two and four years as the length of tenure of the office. Election by the people is the method used in the selection of the chief state school officer in thirty-two states.

Browning, Katherine C. *The Status of Commercial Education in the Middle West*. May, 1933. Pp. 203. (No. 98.)

PROBLEM. This study was undertaken with a fourfold purpose: first,

to determine what percentage of students enrolled in the high schools of the Middle West are taking commercial work; second, to learn the amount and kind of preparation which is required of commercial teachers; third, to learn about the courses of study, methods of procedure, materials, and tests used in teaching commercial subjects; and, fourth, to make a comparison of teacher preparation and courses of study in the Middle West with those of other sections of the United States.

METHOD. Questionnaires were sent to high school principals, heads of the departments of commerce, and commercial instructors located in the high schools of the Middle West for information as to enrollment and courses of study. Twenty-eight of these responses were chosen as representatives of well-established commercial departments in cities where industry and trade had been of a nature to justify the educating and training of students to do the kinds of work demanded for the performance of all phases of business activity. Schools having less than three commercial teachers were omitted. Information regarding teacher training and courses of study in other sections of the United States was secured from printed courses of study and bulletins published by the United States Bureau of Education, state departments of public instruction, and school administration boards of the different cities used for comparison.

FINDINGS. An average of 49.9 per cent of all the students attending these twenty-eight high schools were enrolled on the commerce courses. The average number of students

taught by one teacher was 96.19, with a range from 34.4 to 190.

The Federal Board of Vocational Education, by lending its support, and the state board of education, by declaring certification requirements for commercial teachers, have brought about definite improvements that could never have been accomplished in any other way.

The teachers colleges and universities of many states are making excellent provision for teacher training in commercial education.

The great variety of knowledges and skills represented in the subjects of the commercial course make possible a great diversity of methods of teaching these subjects.

Ideas have changed as to the types of pupils who may be successful in certain phases of commercial work, and guidance into the proper channels is now a part of a well-planned commercial course.

The extensive research work that has been done by committees and individuals and put into tangible working material has been of invaluable assistance to the classroom teacher, heads of commercial departments, and supervisors of commercial education.

Business education is that kind of education which prepares one to take his place in the world as an intelligent, cooperative, honest, and economical individual, with knowledges, skill, ideals, attitudes, and appreciations necessary in a complex and ever-changing, interdependent society.

The fact that the state boards of education of Indiana, Iowa, Michigan, and Ohio require at least a bachelor of science degree, or its equi-

valent, of all new teachers entering the commercial field places the Middle West among the first in its teacher educational requirements.

A comparison of the courses of study offered in the commerce departments of the high schools of the Middle West with those of other sections of the United States reveals the fact that the courses offered, the grades in which offered, and the requirements for graduation are materially the same.

Rochelle, Charles E. *A Statistical Study of Intelligence in the Colored High Schools of Indiana*. June, 1933. Pp. 99. (No. 99.)

PROBLEM. The purpose of this study is to analyze the intelligence of pupils in the colored high schools of Indiana as measured by their performance on Terman's Group Test of Mental Ability, Form A. This major problem has been divided into three minor problems. These problems may be stated as follows:

1. From the performance of the subjects of this study on Terman's Group Test of Mental Ability, Form A, what differences are evident in the levels of intelligence between the A and B pupils, ninth to twelfth grades, inclusive, in the colored high schools of Indiana?

2. From the performance of the subjects of this study on this test, to what extent have the pupils of the A and B grades in the colored high schools of Indiana, ninth to twelfth grades, inclusive, been properly classified and sectioned according to their intelligence?

3. From the performance of the subjects of this study on this test, what are the evidences of racial and

individual differences among the colored high school pupils of Indiana?

**METHOD.** Statistical methods were followed in the study. Six hundred and ninety pupils from all classes, ninth to twelfth grades, inclusive, in eleven of the twelve colored high schools of the state were selected at random and given Terman's Group Test of Mental Ability, Form A. The chronological ages, mental ages, and data used were the point scores, I.Q.'s of the pupils who were given the test. Forty figures, including eight frequency polygons, eight histograms, sixteen sector diagrams, and eight comparative histograms were drawn and used to objectify the twenty-eight tables constructed from the data. The data were collected, classified, analyzed, and interpreted.

**FINDINGS.** The significant ratio for the I.Q.'s of the 9B and 9A grades 10B and 10A grades, 11B and 11A grades, and 12B and 12A grades, respectively, were as follows: 1.96 in favor of the 9B grade; 2.40 in favor of the 10A grade; .49 in favor of the 11A grade; and 1.85 in favor of the 12B grade. There were no significant differences.

The I.Q.'s of the 12B grade and 9B grade show lesser and greater variations with standard deviations of 9.78 and 12.85, respectively. These variations indicated that the I.Q.'s for the subjects of the study for each A and B grade were widely scattered.

The P.E. (av) of the point scores of the 10B grade was 1.82. The P.E. (av) of the point scores of the 12B grade was 2.98. These were the smallest and largest probable errors of the averages, respectively, of the point scores for each A and B grade of the

study. The average scores of both the A and B grades were found to be fairly reliable which indicated that the subjects used in the study were a fair representation of all the pupils in the A and B grades, ninth to twelfth, inclusive, in the colored high schools of Indiana.

A large percentage of the pupils were found to be below normal mental age; these percentages ranging from 62 to 95. A large percentage of the pupils were found to have I.Q.'s below normal, ranging from 39 to 63 per cent. Chronological ages ranged from 11½ to 20½ years for the subjects of the study. I.Q.'s for the subjects of the study ranged from 55 to 134.

When a comparison was made of the performance of the pupils of this study on the test with the norms, the results were as follows: approximately twenty per cent of the pupils of the study exceeded the median (norm) of the ninth grade; approximately fourteen per cent exceeded the median (norm) of the tenth grade; approximately nine per cent exceeded the median (norm) of the eleventh grade; and approximately eleven per cent exceeded the median (norm) of the twelfth grade. There was evidence of considerable overlapping. The quantitative difference was in favor of the norms.

Jardine, William C. *Remedial Methods for Common Faults in High-School Journalism*. June, 1933. Pp. 62. (No. 100.)

**PROBLEM.** To determine the parts of the high-school paper that are not given enough attention in editing.

**METHOD.** Seventy high-school papers from various states were criti-

cized. A number of them were donated by the State Press Association, while the remainder were from the author's own exchange list.

The state score card, consisting of ninety questions, was used to criticize each paper thoroughly.

Six different tables of facts and percentages were established from the score card.

**FINDINGS.** In the table dealing with the covering of news, these figures were found: 63.3 per cent of the papers covered routine news only, 32.9 per cent had no originality, 38.5 per cent had stories that were not timely, 57.0 per cent had stale news, 67.0 per cent did not get all of the news, 52.9 per cent did not have reporters on the scene while the news was in the making, 70.0 per cent had few personals, and 53.3 per cent had no interviews.

In the table dealing with sports it was found that 53.0 per cent of the papers used partial stories, 44.3 per cent had poorly written stories, 76.8 per cent did not represent girls in the news, 55.8 per cent had news which was monopolized by a few individuals, and about 24.3 per cent used sports news to an excess.

From the table dealing with headlines, these figures were obtained: 49 per cent of the papers had labels for headlines, 44 per cent had decks which were not interrelated, 30 per cent had heads with no verbs, 20 per cent had poor punctuation, 27 per cent had no headlines which commented, and only 7 per cent had wrong tense in the headlines.

Errors in advertising were found to be frequent. About 30 per cent of the papers had charity advertisements, 28.5 per cent had advertise-

ments with poor appeal, while 30 per cent presented card advertisements.

Finally, 28.5 per cent used editorials for preaching purposes instead of commenting, and 24 per cent had no student opinion.

**SUGGESTIONS.** The author presented illustrations which advisers could use as samples, which might aid in improving each of the many errors. Also it was suggested that advisers should take more training to equip themselves for their tasks.

Brown, Bessie C. *A Study of Color.* June, 1933. Pp. 89. (No. 101.)

**PROBLEM.** This study was undertaken with a threefold purpose: first, to try to determine to what extent art is being taught in the public schools, and whether or not color is being taught as a separate unit of art instruction; second, to make a tentative course of study for teaching color in the grades; and, third, to compile into one study the subject matter necessary for the knowledge and teaching of color.

**METHOD.** Subject matter was obtained from texts and periodicals for Parts I and II of this study. Part III is a statement of the findings of the research work. In making this research, state courses of study, art courses of study of teachers colleges, and city art courses of study were examined. Also, a questionnaire was sent to state superintendents representing the states from which there were no available state courses of study. Data giving information concerning state art courses of study were obtained from forty-three states. Data were obtained from sixty-seven art courses of study of teacher training institutions, and



from thirty city art courses of study. Part IV is a tentative course of study based upon the city art courses of study examined and upon the author's experience in teaching color in the public schools.

**FINDINGS.** Art is not one of the required subjects to be taught in twelve states. Thirty-one states list art as a required subject in their course of study, twelve of these states listing color to be taught as a separate unit of art instruction in their public schools. From the sixty-seven art courses of study of teachers colleges examined, twelve list color to be taught as a separate unit of art instruction. The city art courses of study examined represented nineteen cities. Of this number fifteen list color to be taught as a separate unit of art instruction.

Hensley, Russell W. *Test-Teach-Test Procedure in General Science*. June, 1933. Pp. 75. (No. 102.)

**PROBLEM.** The purpose of this study was to discover, (1) what minimum essentials of science knowledge are usually obtained without classroom study, (2) what minimum essentials of science knowledge need classroom air, and (3) what varying degrees of stress need to be applied to these topics.

As an outgrowth of the procedure a minor objective was to construct a test that would test the topics covered by the minimum essentials.

**METHOD.** The study was made of the eighth grade pupils in all six-six schools of Henry County, Indiana. By means of a testing program the knowledge the pupils had of the minimum essentials was measured before the pupils gained any knowledge

from the general science course. As each unit of instruction was completed the same test was administered. From the results of the two tests, difficulty and pupil achievement were determined.

**FINDINGS.** The teachers were informed of the inventory results and were instructed to stress the topics that seemingly gave difficulty. The results of the unit tests indicated that the stress, applied where it was needed, caused a great gain of achievement in the difficult topics as determined by the inventory test.

The inventory median score of the test (400 items) was 100. The unit or final median score of the test was 317. The correlation between intelligence and general science subject matter by the inventory test was 0.39, and by the unit test was 0.61.

Boys were slightly superior to the girls in general science knowledge previous to being introduced to the course. The difference between boys and girls as determined by means of the unit or final test was very slight, the difference was in favor of the girls. The correlation between general science and intelligence for the girls was very low (0.19) before they took the course and was high (0.74) after they had taken the general science subject matter and intelligence for the boys was fairly high (0.56) and did not change.

Deal, J. A. *A Comparative Study of the Per-Capita Costs of Instruction of High-School Subjects in Daviess County, Indiana, for the School Year, 1931-32*. May, 1933, Pp. 91. (No. 103.)

**PROBLEM.** The purpose of this study was to compare the ten high-

school corporations of Daviess County, Indiana, on the basis of the salary cost of instruction per credit in order to discover underlying causes of the varied salary plus-credit costs. It was also proposed that information relative to such administrative problems as combination of classes in the same school might be secured.

**METHOD.** The daily class schedules for each teacher with the various class enrollments were secured from the principals of the several schools. These daily class schedules also displayed the lengths of the class periods, the number of class periods per week per subject, and the credit given per subject per semester. The salaries of the different teachers of the several townships were obtained directly from their township trustees.

In apportioning a teacher's salary to subject costs, division was made on the basis of actual teaching periods, no remuneration being charged to duties for assembly periods or extra-curriculum activities. The semester salary of each teacher was divided by the total number of class periods of that teacher per week, this quotient was then multiplied by the total class periods per week per subject, and the product divided by the class enrollment. In the Epsom school allocation of salary to subject costs had to be made on the basis of class hours per week per subject due to lengthened class periods.

The allocation of special salaries and administrative salaries to instructional costs was determined to be the same as the highest paid instructional salary in the system. No consideration was given to the with-

drawal or failure of students as the schools were organized to take care of their complete enrollments.

Comparisons of per-credit costs were made by displaying the class enrollments and per-credit costs for each subject in each high school in various tables and explanations given for the different costs shown by the tables.

**FINDINGS.** The variations in per-credit costs were found to be fairly uniform and generally inverse to the variations in class enrollment although not proportionately inverse. The variations in costs of subjects taught by the same instructor were just as pronounced as the variations in costs of subjects taught in different high schools by different instructors although the underlying causes of the variations were different.

The most important factors influencing costs may be classified into three groups, namely, salary, time, and pupil factors. These factors entered the different computations in quite different relationships, sometimes all being active and at other times only one or two being responsible for the results.

Length of the school term had no effect on the costs computed in this study. Class periods of unequal length in the same daily schedule and the number of class periods per subject per week do have a dominating effect upon the per-credit cost of that subject, the effect being a direct variation of the cost with the length of the class period and also with the number of class periods per week. Heavy teaching loads materially reduce unit costs of instruction. Class-periods-per-week

rank next to class enrollment in effect upon per-credit costs.

Russell, Ronald B. *Evolution of Education in Sullivan County Since 1850*. June, 1933. Pp. 133. (No. 104.)

**PROBLEM.** This study was undertaken to trace the development of education in Sullivan County, Indiana from 1850 to the present time.

**METHOD.** The historical research method was followed in this study. The material used was gathered from a variety of sources. These were personal interviews with older residents and educators and with some educational leaders of the county at the present time, histories of Sullivan County, state and county superintendent reports, auditors reports, personal observations, and histories of education in Indiana. Much of the contributed material came from actual experiences of the older residents of the county. In undertaking this study the author wished to gather this material because in a few years these people will have died and the material will not be available. A great deal of the material for this study was also gathered from records and reports which in a few years will not be available due to being lost, destroyed, burned, etc.

**FINDINGS.** Most of the people who first settled in Sullivan County came from Virginia, Kentucky, and Ohio. Sullivan County consists principally of two distinct types of industries, mining and farming. This gives us two sources of taxes for school funds, as well as requiring a very democratic type of education to suit the needs of two types of people. Sullivan (town) schools are the only

schools in the county that have nine months of school each year. All of the other schools in the county have eight months of school. At various periods in the educational development of the state of Indiana several schools of Sullivan County have been educational leaders. Three of the most outstanding schools are Paxton, Sullivan, and Graysville. The Graysville school in Turman township was one of the first schools in the state to have consolidation. Cass is the only township in Sullivan County that does not have complete consolidation. The school buildings of the county, while not remarkably fine are nevertheless up to date and serviceable. Until about 1900 men teachers predominated, the sex of teachers was about evenly divided until about 1915, and since that time about two-thirds of the teachers have been women. The training and certification, salaries, and tenure of teachers of Sullivan County has been more or less parallel with the average counties of the state. Two of the most outstanding graduates of Sullivan County are Frank Aydelotte, president of Swarthmore College, and Will H. Hays, president of the Motion Picture Producers and Distributors of America, Inc. Sullivan County has had all of the early forms of extra curriculum activities such as spelling matches, pie and box suppers, class functions, etc. The per cent that the total population of Sullivan County is of the total population of the state has been .1 per cent from 1853 until 1930 when the percentage dropped to .09. This was taken for ten year periods.

Brewster, Georgia A. *Procedures for Stimulating the Writing of Orig-*

*inal Poetry by Junior High School Pupils.* June, 1933. Pp. 119. (No. 105.)

**PROBLEM.** The writer's aim in this thesis was to set forth the purposes, techniques, and devices used, and the conclusions reached in an effort to teach junior high school pupils to express themselves in original verse.

**METHOD.** The most fundamental method used in conducting this work was to avoid conscious technique, that is all didactic and formal instruction on the architecture of poetry. The mechanical, scholarly measurements of poetry: rhyme, rhythm, stanza, and figures of speech were taught incidentally; and definitions were not often given or required.

A second method used which was of as great value as the "no technique" method was the reading of poetry to the children. Much reading was done, with or without pretext, and often without due regard for the set lesson plan.

A third method used in this study was the writing of original verse by the pupils; this was in itself technique. This activity was invited, encouraged, or requested, not as a climax to the two above mentioned methods employed, but the writing was carried on simultaneously with the discussions and the reading. Any time was the time to write, and the subject was any subject upon which the pupil had a sincere thought.

**THE FIELD OF THE STUDY.** The pupils used in this study were those of the highest mental ability in the seventh grade of the Sarah Scott Junior High School of Terre Haute, Indiana. This group was supplemented by pu-

pils of the eighth and ninth grades who wished to continue this work, and by the members of the Poetry Club. The combined enrollment of these classes and the Poetry Club was 506 pupils. The work extended over a period of three years.

**FINDINGS.** The writer's problem, to stimulate pupils of junior high school age to write creditable poetry, was, to an appreciable degree, solved. The results of this work were of two kinds: the tangible and the intangible.

The tangible results were, broadly speaking, three: first, the poems written by the pupils for the school paper, the *Orange Peel*; second, two volumes of an anthology of original verse, *Young Voices*, for the years 1931 and 1932; and third, the commendation of several instructors interested in this work, chief of whom was Hughes Mearns of the Lincoln School of Columbia University.

The intangible results shape themselves into the following benefits:

That growth which came from the pupils' being brought to closer appreciation of poetry in general.

That benefit which came from the attempt to write even when the production was not very praise-worthy.

That enrichment which came from a closer contact with beauty and its meaning.

That development which came from a sense of the sanctity of words that the practice of writing poetry engendered.

Dudley, Marion Sylvan. *An Evaluation of Junior High School American History Textbooks and the Preparation of a List of Textbooks to Be*



*Used in This Line.* June, 1933. Pp. 74. (No. 106.)

**PROBLEM.** This study was undertaken with a threefold purpose: first, to determine the objectives for teaching American history in the junior high school; second, to set up criteria for selecting textbooks to meet these objectives; third, to use these criteria to select a list of textbooks suitable for use in junior high school American history.

**METHOD.** The objectives for teaching history in the junior high school given in fifty courses of study, fifty articles in educational journals, the prefaces of twenty-eight junior high school history textbooks, and twelve books on method were listed on cards, classified in thirty categories, and ranked in terms of the frequency of their occurrence.

The per cent of the contents of each twenty-six textbooks given to each of the major periods of American history was found. These per cents were compared with the findings of other studies to show the trends in the writing of American history texts during the last thirty years.

The per cent of each textbook given to teaching aids was found.

One thousand word counts were made for each of twenty-eight textbooks. These 1,000 words were looked up in Thorndike's "Word Book," and the "vocabularly range," "zero frequency words," and the "median index number" tabulated for each textbook.

Twenty-eight textbooks were investigated to determine the number and kinds of maps and illustrations used. The titles of the maps were investigated to determine the propor-

tion dealing with the different phases of history.

**FINDINGS.** The statements of objectives varied from the most general to the very specific. The objectives given in courses of study were more specific than those given in any of the other sources investigated.

The average per cents of the contents of twenty-six textbooks given to the major periods of American history are as follows: Exploration and Discovery, 7.2; Colonial Development, 11.1; Colonial Wars, 2.4; Pre-Revolutionary period, 3.4; Revolution, 5.2; 1783 to 1812, 9.9; 1812 to 1861, 20.1; Civil War, 5.7; from 1865 to date of publication, 33.9

During the last thirty years the proportion of space given to wars has steadily declined. The proportion of space devoted to the periods of Exploration and Discovery, Colonial Development, and the period from 1783 to 1812 has declined. The proportion of space devoted to the period from 1812 to 1861 has remained practically the same. The proportion of space devoted to the period from 1865 to the date of publication has increased 14.45 per cent to 33.9 per cent.

The 1,000 word counts showed that the "zero frequency words" in the twenty-eight textbooks ranged from seven to thirty-four and the median was twenty-one. The "vocabularly range" varied from 448 to 540, and the median was 477. The "median index numbers" ranged from 120 to 160 and the median of the "median index numbers" was 144.5.

The proportion of space given to teaching aids in twenty-seven textbooks varied from 5.3 per cent to 18.5 per cent and the average was 10.5

per cent. Textbooks published since 1929 gave a greater proportion of space to teaching aids than those published before that date.

The number of illustrations in twenty-six textbooks varied from 93 to 490, and the average was 269.3. Of a total of 7,001 illustrations 5,832 or 83.3 per cent were less than one-half page in size.

The number of maps in twenty-seven textbooks ranged from fourteen to seventy-eight and the average number was 47.6. Of the 1,284 maps 360 or 28 per cent were war maps. Another 360 or 28 per cent were maps dealing with the period since the Civil War. The more recent textbooks contain social and industrial maps in far greater numbers than the older textbooks.

Thomas, Arthur F. *An Educational History of Pike County, Indiana*. June, 1932. Pp. 103. (No. 107.)

**PROBLEM.** This study was undertaken for the purpose of presenting to the people of Pike County and to any who cares to read this thesis, a history of Pike County, Indiana, schools from their beginning to the present. The author wished a more accurate and general knowledge of the school situation of Pike County than he had had before the beginning of this study.

**METHOD.** The historical research method was followed in the study. Old documents, history texts, personal letters, and interviews from many qualified individuals were used as a basis for the study. The state history was correlated with the county history in many instances.

**FINDINGS.** The mining industry at one time was about to supplant the

farming industry, but farming is now coming back into its own. Since the schools of the county depend upon the farming industry for their support, it is natural that the school men support agriculture and this they are doing to a great extent.

Population of the county is constantly decreasing.

Rural schools of the county are rapidly disappearing. Consolidation is rapidly superseding the rural schools.

Pike County's boys' and girls' clubs are rapidly growing.

School supervision is becoming more important and scientific.

School reports are more accurate and complete, showing the efficiency of the school administrators.

All congressional school lands have been disposed of.

The permanent school fund has increased very little since 1905.

School finances are in a critical condition.

Education is costing more than the county is able to support.

Six out of the nine townships have asked for state relief since 1925.

Cost per pupil, both in the high school and in the grades for the entire county, is still below the state median cost per pupil in the same.

Seven out of the nine townships are levying from twenty to twenty-five cents more than the state requires in order to receive state relief, and are still unable to support their schools to the standards which the state sets.

Money back of each enumerated child is far less than the median of the state.

Salaries of county officials are much higher than any salary paid

the school administrators in the county.

Eaton, Dorothy. *College Careers of High School Athletes*. June, 1933. Pp. 50. (No. 108.)

**PROBLEM.** This study was undertaken with a twofold purpose: first, to compare the intelligence and the scholastic achievement of high school letter men and non-letter men, as measured by psychological examination and by college marks; second, to determine whether high school letter men enter college and are graduated from college in greater or lesser numbers than non-letter men from the same high school graduating classes.

**METHOD.** The research method was followed in the study. For the comparison of psychology ratings and of scholarship indexes of letter and non-letter men, records of all men students enrolled in Indiana State Teachers College were used. For the comparison of college entrance and college graduation, data were secured by interviews and by examination of high school records. Records of 2,907 boys from 136 high school graduating classes, representing 71 high schools in Indiana and 2 high schools in Illinois, were studied.

**FINDINGS.** College records of 679 men students of Indiana State Teachers College show that the former high school letter men are slightly lower in intelligence rating than the non-letter men. Percentiles of the 291 letter men range from 0 to 99 with a mean of  $44.65 \pm 1.07$ ; percentiles of the 388 non-letter men range from 0 to 100 with a mean of  $50.39 \pm .94$ .

College records of scholastic

achievements of the same students show that the letter men have practically the same scholastic standing as the non-letter men, having a higher scholastic rating in proportion to intelligence percentiles than do the non-letter men. Scholastic indexes of letter men range from 0 to 95 with a mean of  $50.45 \pm .61$ , while those of non-letter men range from 0 to 96 with a mean of  $52.87 \pm .62$ .

Records of post-high school scholastic careers of 2,907 high school graduates show that many more letter men than non-letter men enter college and are graduated from college. Of this group of high school graduates, 30.76 per cent enter college. Of the letter men, 42.82 per cent entered college, while of the non-letter men, 30.68 per cent entered college. Of those who were graduated from high school before the year 1929, 28.71 per cent of the letter men and 22.00 per cent of the non-letter men have completed college careers by graduation.

The years of economic depression have reduced the percentages of both groups entering college, but the percentage of non-letter men has been reduced much more than has that of letter men. Since 1929, 38.45 per cent of the letter men and only 26.70 per cent of non-letter men have entered college.

DeVaney, Grace. *The History of the Woodrow Wilson Junior High School*. June, 1933. Pp. 159. (No. 109.)

**PROBLEM.** The purpose of this thesis is to present a clearly defined picture of the development of the Woodrow Wilson Junior High School from its origin to June, 1930. Special at-

tention is given to the following factors:

- a. The history of the selection of the site.
- b. The construction of the physical plant.
- c. The organization of the school.
- d. The development of the curriculum in the light of significant trends.

METHOD. The principal sources of data used in this investigation are:

- a. The minutes of the Board of School Trustees, of the City of Terre Haute, Indiana.
- b. Interviews.
- c. Terre Haute newspapers.
- d. Circulars issued by the first principal.
- e. Magazine articles, books, and researches that had been written or made by reputable persons that had a bearing on the significant trends in the junior high school movement.
- f. Practices of the school itself.

FINDINGS. Since no conclusions could be reached in a thesis of this type, the findings cannot be given. Instead a brief statement will be given concerning the material contained in the thesis. Chapter one is an introductory chapter dealing with the history of the junior high school movement in the United States and then, to be more specific, the history of the movement in Terre Haute, Indiana, up to the establishment of the Woodrow Wilson Junior High School. In the second chapter the site is discussed, including the attempts to arouse the interest of the people, the available sites, and the purchase of the present site. The specifications, plans, bids, contracts, and equipment are treated in chapter three. The fourth chapter deals with the organ-

ization of the school itself, and the fifth chapter with the curriculum.

Rogers, Robert Leroy. *A Survey of Health Education Activities in Terre Haute, Indiana*. June, 1933. Pp. 133. (No. 110.)

PROBLEM. This study was undertaken to determine the health education activities of the various educational and non-educational organizations in Terre Haute, Indiana.

METHOD. The survey method was followed in the study. Personal interviews were held with administrators, supervisors, and teachers in the public and private schools, and with executives of endowed and public institutions, of the City Board of Health, of medical organizations, of children's organizations, of social and civic organizations, and of commercial organizations. Schoolrooms, clinics and lectures were attended. Advertising based on health or safety was noted.

FINDINGS. The children in the primary grades of the public schools receive some health instruction through correlation. Each teacher formulates her own program with the assistance of the general supervisor. The program of the elementary grades allocates thirty-five minutes per week to physiology and hygiene. The textbook method is used, and little enrichment was found. The junior high school grades had no program for health instruction; however, a few isolated activities were carried on. The senior high school grades offered no health instruction other than correlated activities. After 1932, all ninth grade pupils will receive one semester of health education. A well organized,



supervised program of health instruction was not found.

The Catholic schools had no program of health instruction. A little sporadic correlation was found. The Immanuel Lutheran School gave about one hour per week to discussion of health. The King Classical School spent no time in health instruction.

The Indiana State Teachers College has a department of physiology and hygiene, but this work is elective. Some required courses in physical education may contribute to health instruction. Related courses in other departments also contribute to this.

The City Board of Health has no educational program. Some literature is obtainable at the administrative office, and some literature is distributed at the daily venereal clinic conducted by this organization.

The three local medical societies and the dental society have not been active in educational work. The two hospitals have contributed to health instruction through their schools of nursing. The Public Health Nursing Association and the County Tuberculosis Association have distributed literature and given talks on health to various groups.

The Boy Scouts, Girl Scouts, Boys' Club, Girls' Club, Y. W. C. A., and Y. M. C. A. have contributed to health instruction, most of which has been mental hygiene. Little organized health instruction was carried on.

No social or civic organization had a health education program; however, most of these sponsored in some manner other organizations that did

such work. Several groups had annual health talks for members.

Insurance companies furnished a large part, and in most cases all, of the safety health instruction found in commercial organizations. The Public Service Company has a safety program, and the Linco Motor Oil Company had a program of first aid instruction for employees. The radio broadcasting station conducted a health contest during the summer of 1932.

Hall, William C. *A Comparative Study of the Biology Courses of the High Schools and Teachers Colleges of the United States*. June, 1933. Pp. 52. (No. 111.)

**PROBLEM.** This study was undertaken with a threefold purpose: first, to determine the methods and practices used by the teachers colleges in the training of biology teachers; second, to study the high school methods and courses in biology; and, third, to determine the adequateness of the preparation of the teacher for the responsibility of teaching biology.

**METHOD.** The research method was followed in the study. Notes were made covering fifty-three questionnaires from teachers colleges in thirty different states and 220 questionnaires from high schools in the same states. A study of the science syllabi of the teachers colleges was made. Notes were taken covering the biology courses listed in the bulletins and catalogs of the teachers colleges. A study was made of the biology courses as outlined in the state courses of study. All of these notes were analyzed for mater-

ial to support the argument as stated in the program.

**FINDINGS.** The important facts, as revealed by this study, are found in the following statement:

Thirty-four per cent of the teachers colleges have no departments of biology.

In some colleges the science departments are combined with unrelated departments.

Degrees conferred in science require more training in other departments than in science.

The teacher does not receive enough training in high school methods and problems of teaching.

Licenses to teach biology, in most cases, are too easily obtained.

More than ninety per cent of the teachers colleges do not have syllabi of their biology courses.

Sixty-seven per cent of the colleges had no courses in the teaching of biology.

The high schools of the United States are teaching all the branches of natural science.

Seventy-five per cent of the high schools are teaching biology.

The requirements for graduation in the biological sciences covered a wide range.

There seems to be no clearly established median as a requirement for graduation from high school.

The methods of teaching biology in the high schools vary greatly.

Not many field trips are made with high school classes in biology.

The two most widely used methods are the study-recitation and the laboratory.

Jones, Daisy M. *A Study of the Concrete Material in Oral and Writ-*

*ten Expression Contributed by First Grade Children as a Result of Their Experiences in Following the Program Outlined in the Indiana State Courses of Study.* May, 1933. Pp. 111. (No. 112.)

**PROBLEM.** This study was undertaken with a threefold purpose: first, to show through concrete examples how the Indiana State Course of Study in Oral and Written Expression contributed toward the accomplishment of the goals it sets forth for first grade; second, to evaluate the background of English built up for the children by providing for the experiences recommended by the State Course of Study; and third, to test the effectiveness of the English teaching done in following the suggestions proposed by the State Course of Study.

**METHOD.** The research method was followed in the study. The experiences in English suggested by the Indiana State Course of Study were provided for the children. A record of these experiences was kept by means of a daily diary. The record included the English experiences of the children which consisted of the daily lessons in English, the situations arising incidentally, and spontaneous contributions. The material recorded was studied for the purpose of arriving at some tentative conclusions as to how the State Course of Study may be used most effectively. Shepherd's test of English ability and an informal survey of the English errors of the pupils were used to supplement the concrete material in measuring results.

<sup>1</sup> Lou A. Shepherd, *A Plan for Teaching Language and Literature in the First and Second Grades.* Pp. 7-19.

**FINDINGS.** A total of 370 English experiences were recorded in the diary. Situations involving oral expression constituted 95.7 per cent of these experiences while situations involving written expression constituted the other 4.3 per cent.

The situations involving oral expression were distributed as follows: conversation 24.9 per cent, announcements 3 per cent, directions 3 per cent, reports 9.7 per cent, summaries 10 per cent, common conventions 4 per cent, creative work 7.3 per cent, appreciation 25.7 per cent, and reproduction 7.1 per cent.

The situations involving written expression were distributed as follows: letter writing 2.8 per cent, writing notices and announcements .5 per cent, and writing original compositions 1 per cent.

The test used measured skills set up for achievement by the Course of Study. As measured by the test, every child showed improvement on the items included. This improvement varied from ten to thirty-one points per child with an average of twenty points per child.

The check on English errors showed that the group had made improvement in the use of the correct forms listed in the Course of Study to be mastered in the first grade. This improvement is indicated by the decrease in the total number of errors noted in the weeks in which the record was kept, namely: forty-two in the second week, thirty-four in the fourteenth week, and twenty-eight in the twenty-fourth week.

When the experiences of the children were compared with the goals set up in the Course of Study, it was

evident that the goals had been attained.

A comparison of the English experiences of the children with the opinions of authorities as to what constitutes an acceptable English program indicated that there had been build up for these children a suitable background of English.

The results of the tests which were administered indicated that the teaching done in following the program outlined in the State Course of Study in Oral and Written Expression had been effective.

Walters, Lee. *Analyses of Seven High School Geography Textbooks*. June, 1933. Pp. 120. (No. 113.)

**PROBLEM.** This study was begun with a twofold purpose: first, to make analyses of the leading high school geography textbooks (1) in the field of general principles of geography, and (2) in the field of economic geography; second, to make a comparative quantitative analysis of the textbooks in each of the two fields.

**METHOD.** The research method was followed in the study. The historical development of high school geography textbooks and the selection of geography textbooks were studied in reference books and periodicals. A questionnaire in the form of a score card for evaluating high school geography textbooks was sent to one hundred high school geography teachers in the state of Indiana. Four textbooks in the field of economic geography and three in the field of general principles of geography were analyzed quantitatively as to content. A comparative quantitative analysis and recommendations were

made for each group of textbooks.

**FINDINGS.** The findings for the economic geography textbooks were as follows:

The average number of pages for each book was 609.

An average of 15.3 per cent of each book was devoted to photographs.

An average of 2.3 per cent of each book was given to graphs.

The maps occupied an average of 10.1 per cent of each book.

An average of 3.2 per cent of each book was devoted to tables.

An average of 7.1 per cent of each book was given to exercises.

An average of 61.7 per cent of each book was made up of words.

A central tendency was found to humanize geography by the use of photographs, maps, graphs, and tables. On the basis of the analyses made, the four textbooks were ranked as "A," "B," "C," and "D."

The findings for the geography textbooks of general principles were as follows:

The average number of pages for each book was 502.

An average of 13.7 per cent of each book was devoted to photographs.

An average of 1.1 per cent of each book was given to graphs.

An average of 12.7 per cent of each book was made up of maps.

An average of 1.3 per cent of each book was devoted to tables.

An average of 3.2 per cent of each book was given to exercises.

An average of 67.6 per cent of each book was made up of words.

A central tendency of modern geographers was to humanize geography especially the physical aspect. On the basis of the analyses made, the three

textbooks were ranked as "A," "B," and "C."

Myer, Mildred Hansel. *A Revision and Tentative Standardization of the Tonal Memory Test for the Third Grade*. June, 1933. Pp. 28. (No. 114.)

**PROBLEM.** Since the widely used "Measures of Musical Talent" were not planned for use below the fifth grade the present study was made to supply the need of such a test which might be used with children lower than the fifth grade. Eight hundred sixty-seven children of the third grade of Terre Haute were used in the experiment. The third grade was chosen because it is at this level that notation and sight reading are usually begun and private lessons are usually begun at this age. It was also found by preliminary experiment that children younger than the third grade were not able to take this type of test because of difficulty in understanding instructions and in the mechanics of writing.

**METHOD.** The Tonal Memory record of Dr. Seashore's "Measures of Musical Talent" was used because it has been shown to be most predictive of success. The two-span, three-span, and four-span portion of the record was used and the test was given to the children three times. The first papers were not graded and this test was called a practice test. The papers of the second and third tests were graded and the highest score for each child was the one used in establishing the norms.

**FINDINGS.** The results of the test are as follows: The reliability of the test, found by correlating the scores of the third and fourth repetitions of



the test, was found to be .6797 with a probable error of .1305. This shows that the shortened form of the Tonal Memory record of "Measures of Musical Talent" to be of proper difficulty and reliable for use in the third grade.

Clayton, George B. *A Method of Arriving at Probable Teaching Success Based Upon Scholarship*. June, 1933. Pp. 37. (No. 115.)

**PROBLEM.** This study was made to determine a method of predicting the probable teaching success of special industrial arts majors of the Indiana State Teachers College.

**METHOD.** The statistical method was used in this study. The records of 211 special industrial arts majors comprise the basis of this study.

The preliminary treatment of the data served to define the group doing practice teaching in relation to all special industrial arts majors.

The scholarship index was used to reduce the letter marks of each individual to numerical values.

The scholarship index in practice teaching was taken as the criterion and indexes in industrial arts, education and academic work were the prognostic factors arbitrarily chosen.

Correlations were calculated between the criterion and each factor, and between each factor and the two factors.

By using partial and multiple correlation, the regression equation was determined which is used to predict the probable teaching success.

The regression equation was then applied to twenty random samples to show its tendency toward accuracy

in predicting practice teaching indexes which are already known.

**FINDINGS.** The group of industrial arts majors doing practice teaching is significantly an inferior group when compared with those exempt from practice teaching.

The highest correlation between practice teaching and any of the factors was .53. The correlations were all positive.

The correlation between practice teaching and the prognostic factors grouped was .5103. The correlation of the criterion with the prognostic factors, determined by partial and multiple correlation was .559.

The regression equation shows a tendency to predict practice teaching indexes with a reasonable degree of accuracy, a majority of the predictions falling within the limits of the probable error of the estimate.

Stewart, Howard. *An Occupational Study of the Graduates of the Champaign High School, Champaign, Illinois*. June, 1933. Pp. 143. (No. 116.)

**PROBLEM.** This study was undertaken with the idea of learning if the Champaign High School is actually teaching the subjects needed by its graduates after being employed in various positions. If not, then what subjects are needed, and what subjects now taught may be strengthened by extending the period of instruction, or by revising the subject matter so that they do meet the needs of the graduates.

**METHOD.** The report blank questionnaire method was used in this study in order that all data might be uniform. All the graduates of the years 1920, 1924, and 1928 that

could be located were interviewed. For the year 1920, twenty-four or 20.17 per cent, of the 119 graduates were located and interviewed; for the year 1924, forty-one, or 24.69 per cent, of the 166 graduates were consulted; and for the year 1928, ninety, or 47.61 per cent, of the 189 graduates were interviewed. Of the total of 474 graduates for the three years a total of 155 cases, or 32.7 per cent, were secured. The report blanks were sorted as to year of graduation, high school commercial group and high school non-commercial group, sex, and the various positions held by the graduates.

**FINDINGS.** The majority of all the cases found employment of some type in a reasonably short time after graduation. A rather large number were enrolled in the University of Illinois at the same time they were working. There were surprisingly few persons that reported no activity following their graduation from high school.

The per cent of boys enrolled in the commercial department of the high school decreased and the per cent of the girls increased with each year studied. The per cents of the boys enrolled in the department were 66.3 in 1920, 36.1 in 1924, and 27.8 in 1928; while the per cents of the girls enrolled were 33.7 in 1920, 63.9 in 1924, and 72.2 in 1928. These per cents indicate a very decided trend toward training girls rather than boys in the commercial subjects.

By far the greater number of positions were secured by means of personal application by the individual.

Positions classed as general clerical employed the greatest number of persons. Next in order came such

positions as bookkeeper, and bookkeeper and stenographer, involving the use of the skill subjects typewriting, shorthand, and bookkeeping. Most of the graduates interviewed indicated their training was sufficient to enable them to hold their positions. The commercial group reported a very great need for the subjects of typewriting, shorthand, and bookkeeping, while the non-commercial group indicated a need for more widespread subject matter.

Commercial law was found to be of but little use. Commercial geography was ranked by all groups as being the least most essential of the subjects now taught.

The employees gave up their various positions for four reasons. They are, briefly, because of the securing of better positions, the limitation in their previous field, the depression, and in order that the individual might attend school.

The salaries of the 1920 group were higher for both sexes than for the year 1924, and the salaries of the 1924 groups were higher than those of 1928. The graduates that enrolled in business colleges after leaving high school received but slightly higher salaries than did the high school commercially trained groups.

Typewriting was ranked as the most necessary subject now taught, with bookkeeping and shorthand ranked next most important. All groups ranked business letter writing as the most important subject of those that might be added to the commercial curriculum.

Albright, Aaron. *Signs of Health in School Children That a Teacher*

*Should Know.* June, 1933. Pp. 99. (No. 117.)

PROBLEM. The primary purpose of this study is to present the actual and necessary information which will enable the teacher to help students develop sound minds in sound bodies.

METHOD. Two methods were used: (a) A questionnaire on physical ill health was given to seventy-three teachers of Illinois and the results tabulated. (b) Existing material. This information was divided into divisions, namely: physical health, physical ill health, mental health, and mental ill health.

FINDINGS. The results of the questionnaire revealed the following facts:

Of the seventy-three questioned none were able to fill correctly all of the blanks.

The median number knowing the correct answer was thirteen for cause or causative agent, seventeen for source of infection, twenty-one for mode of transportation, fifteen for the period of communicability, three for the period of incubation, thirty-seven for the period of quarantine, and fifty-two for symptoms.

The symptoms for adenoids, common cold, deafness, earache, flat feet, goitre, hyperopia, indigestion, mumps, myopia, rickets, St. Vitus' dance, tonsillitis, trachoma, tuberculosis, and whooping cough were more generally known than those of other diseases and defects equally as common and as severe such as, anemia, influenza, kyphosis, lordosis, measles, scarlet fever, etc.

Many teachers had only a vague idea that the answers they gave were correct.

Talbott, Grace. *John Milton and His Relation to Modern Philosophy of Education.* June, 1933. Pp. 94. (No. 118.)

PROBLEM. In this thesis it was undertaken to show the existing relationships between the educational theories of John Milton (1608-1674) and those of three modern philosophers of education, William James and John Dewey, representatives of American thought, and Sir John Adams as typical of English thought.

METHOD. In Part I the history of philosophy and education has been carefully traced, in order to show the connecting links between the two subjects and to give the backgrounds of the educational philosophy of Milton and that of modern times.

Part II consists of an analysis of Milton's educational theories as stated in his tractate *Of Education*. Evidence is given to prove that his scheme of education is practical.

In Part III excerpts from the works of three modern philosophers and Milton are quoted to show the similarity of views upon the following topics. 1. education (definition), 2. interest, 3. discipline, 4. nature, 5. social inheritance, 6. citizenship, 7. moral education, 8. appreciation of poetry.

FINDINGS. 1. Philosophy of education has evolved. Few ideas have been added but many old ones have been elaborated upon.

2. Milton set forth in a striking manner Plato's ends of education which the world has been trying for more than twenty centuries to realize.

3. Milton's scheme of education was practical, critics to the contrary notwithstanding.

4. Milton anticipated many modern educational theories in his attempt to reform the education of his day.

5. Milton's academy was a model for early American ones.

6. Milton may be ranked as a significant educator.

Horsley, Arena M. *The Educational Status of Negro Industrial Employees in Terre Haute and Indianapolis, Indiana*. June, 1933. Pp. 44. (No. 119.)

**PROBLEM.** For some time there had been an inner urge on the part of the writer to find out how much education the negro industrial employees of Terre Haute and Indianapolis possessed. The writer felt that the average negro industrial employee did not possess more than six or seven years of training. With this in mind she secured enough data to support her question.

**METHOD.** The research method was followed in the study. When this study was originally planned, the principal source of data was to be a questionnaire. The questionnaires were to be placed in the hands of negro high school pupils who would give them to their parents and bring them back to school. In course of time it was found that this device was inadequate and had to be supplemented with personal interviews.

A trial questionnaire was prepared and placed in the hands of forty negro students in Gerstmeyer High School, Terre Haute, Indiana, in January, 1932. Five hundred questionnaires were placed in the hands of junior high school pupils in the two negro schools of Terre Haute and at Crispus Attucks High School of Indianapolis.

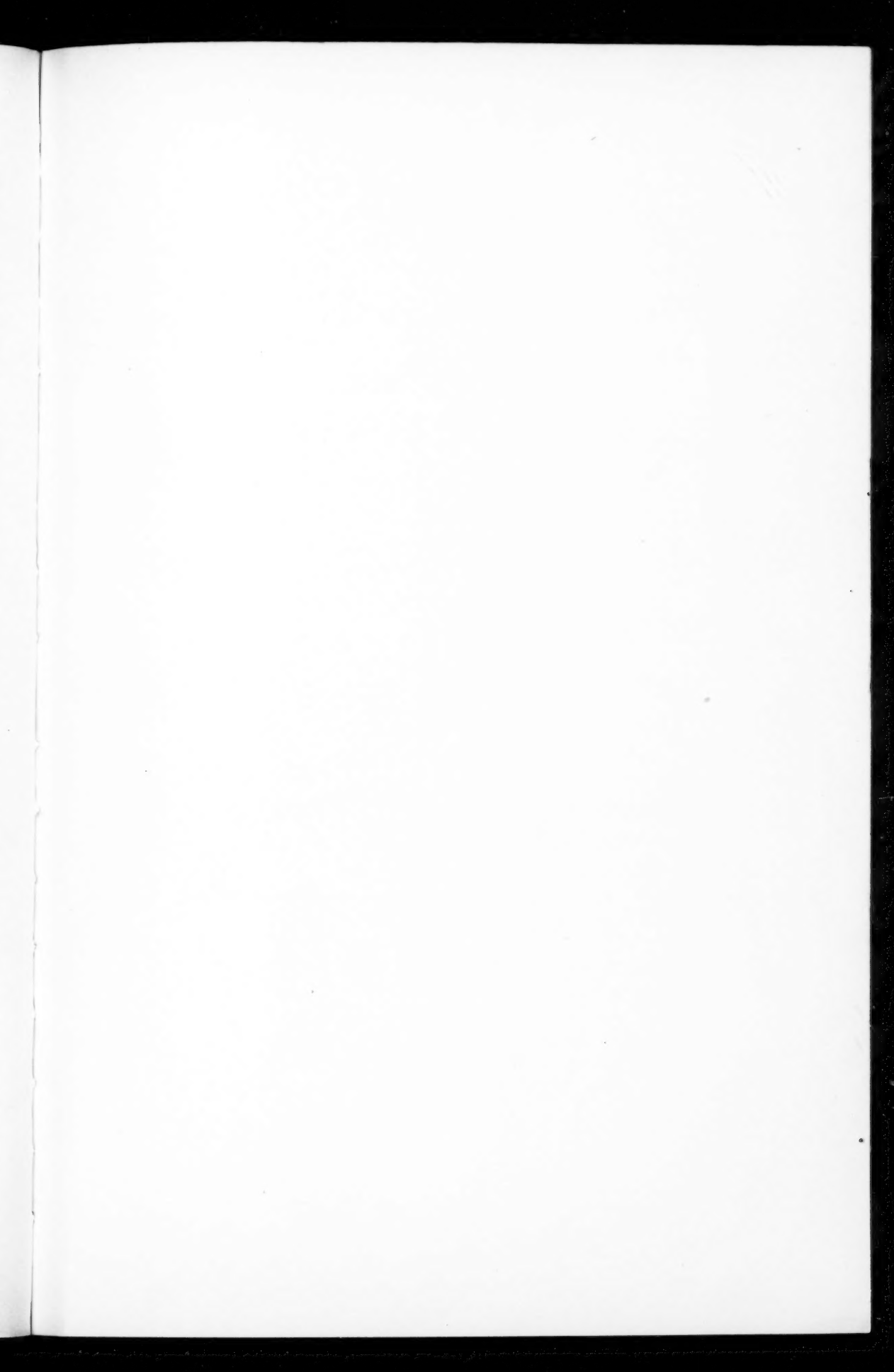
**FINDINGS.** A total of 1,389 persons was reached through this study. The average amount of education for both male and female was 6.68 years.

The occupations engaged in by the parents of high school pupils and those interviewed were similar to the occupations engaged in by all persons in the United States.

The number of hours worked each day by the parents of high school pupils and the pupils interviewed compares favorably with the national trend of employees workday which is toward an eight hour day.

A large number of persons have some spare-time, but this spare-time is not used to improve thier educational status. A very small number make use of the library and educational clubs. The working conditions control the community life of negro employees, but if he expects to raise his educational status, he must make use of all outlets for his own improvement.





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